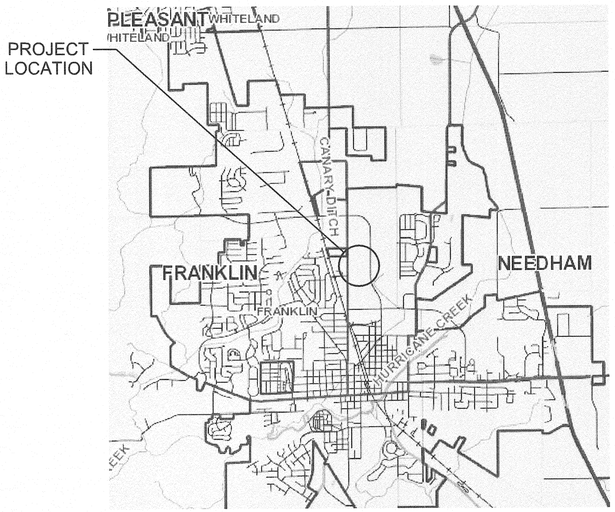
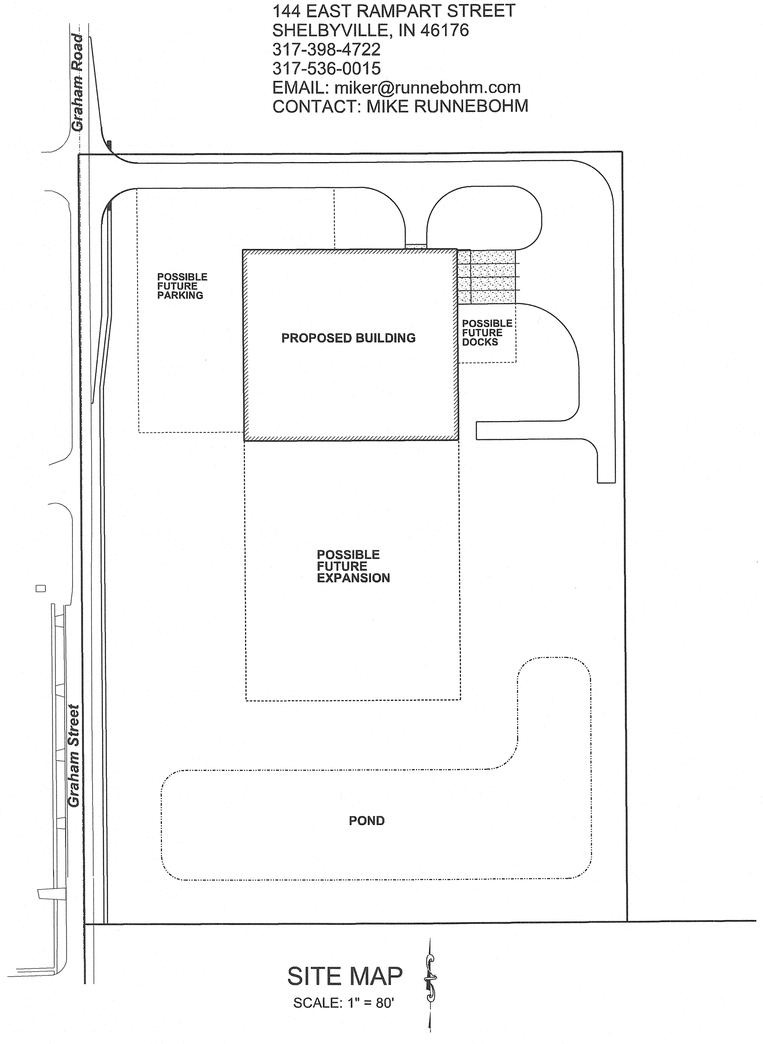
CITY OF FRANKLIN SPEC BUILDING

NE 1/4 & SE 1/4 SEC. 11 - T12N - R4E, CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA
ZONED: IG

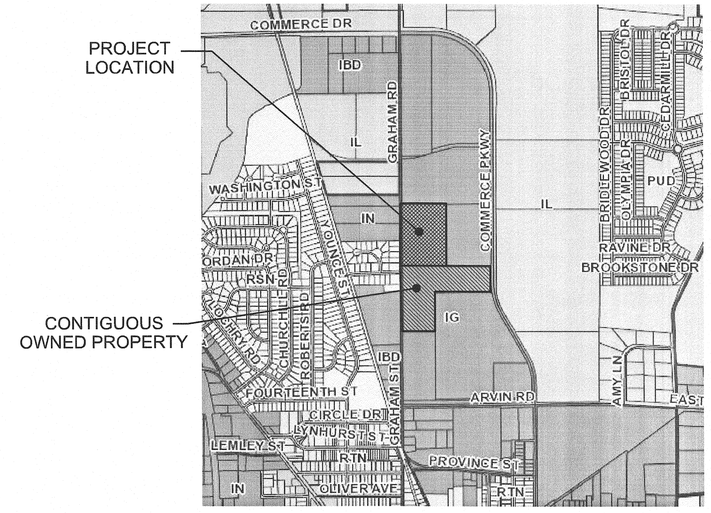


VICINITY MAP
NO SCALE

PROJECT APPLICANT/OWNER
RUNNEBOHM CONSTRUCTION
144 EAST RAMPART STREET
SHELBYVILLE, IN 46176
317-398-4722
317-536-0015
EMAIL: miker@runnebohm.com
CONTACT: MIKE RUNNEBOHM



SITE MAP
SCALE: 1" = 80'



ZONING VICINITY MAP
NO SCALE

Project Summary

This project proposes a 51,340 square feet shell building with minimal paved surface. At this time, the end user for the building is unknown therefore parking, trash enclosure, site lighting, landscaping, dock size, signage, etc. cannot be determined. However, the drainage concept does provide accommodations for full build-out of the lot for the Zoning Ordinance maximum impervious coverage of 85%

PLANS PREPARED BY:

BANNING ENGINEERING
853 COLUMBIA ROAD, SUITE #101
PLAINFIELD, IN 46168
BUS: (317) 707-3700, FAX: (317) 707-3800
E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com
CONTACT: RYAN LINDLEY

OPERATING AUTHORITIES

GAS
Vectren
600 Industrial Drive
Franklin, IN 46131
317-736-2986

CABLE TELEVISION
Comcast
5330 East 65th Street
Indianapolis, IN 46220
317-447-9934

WATER
Indiana American Water
555 East County Line Road, Suite 201
Greenwood, IN 46143
317-881-0270

ELECTRIC
Duke Energy
2515 N. Morton Street
Franklin, IN 46131
317-517-3103

ELECTRIC
Johnson County REMC
P.O. Box 309
Franklin, IN 46131
317-736-6147

TELEPHONE
CenturyLink
1147 N. Morton Street
Franklin, IN 46131
317-736-6630

SANITARY
Franklin DPW
796 South State Street
Franklin, IN 46131
317-736-6709

STORM
Franklin DPW
2851 N. Morton Street
Franklin, IN 46131
888-736-3640

FIRE DEPARTMENT
Franklin Fire Department
1800 Thornburg Lane
Franklin, IN 46131
317-736-8967

SCHOOL DISTRICT
Franklin Community Schools
908 Grizzly Cub Drive
Franklin, IN 46131
317-738-5800

SHEET INDEX

SHEET NO	DESCRIPTION
C100	TITLE SHEET
C101	PROPERTY SURVEY
C102	SITE LAYOUT PLAN
C110	GRADING, DRAINAGE AND UTILITY PLAN
C400	INITIAL EROSION CONTROL
C401	FINAL EROSION CONTROL
C402	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
C500	EROSION CONTROL DETAILS
C501	MISCELLANEOUS DETAILS
C502	STORM SEWER DETAILS
L100	LANDSCAPE PLAN

REVISIONS

NUMBER	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

PROJECT MANAGER:_____ DATE:_____

THESE PLANS ARE NOT TO BE CONSIDERED FINAL OR TO BE UTILIZED FOR CONSTRUCTION UNLESS SIGNED AND DATED BY THE APPROPRIATE BANNING ENGINEERING PROJECT MANAGER.

THESE PLANS ARE NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT.

CERTIFIED BY: Walter F Reeder 9/13/12

WALTER F. REEDER
REGISTERED
PE 60017777
STATE OF INDIANA
PROFESSIONAL ENGINEER

Date: 09-13-12
Project No: 11191R
Sheet No: C100

Indiana 811 Know what's below. Call before you dig.

CITY OF FRANKLIN SPEC BUILDING

09/13/2012, 08:19 AM
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Folder: Sheet Files
File Name: 11191R_tit.dgn

OWENS-ILLINOIS CLOSURE, INC.
INSTR. #96-002491

S 90°00'00" E 608.36'

20' D.E.

MAURICE FRED LINVILLE
AND HELEN ANN LINVILLE
D.B. 221, PG. 555

50' BUILDING LINE

N 00°00'00" E 72.31'

P.O.B.

SW Corner
NE ¼, Sec.11-T12N-R4E
Mag Nail Found

Graham Road

ASPHALT

CULTIVATED FIELD

20' SANITARY SEWER EASEMENT INSTR. #1999-036255

EXISTING 40' EASEMENT FOR RIGHT OF WAY D.B. 275, PG. 611

25' BUFFER YARD

75' BUILDING LINE

20' D.E.

INV =749.25
12" CMP

INV =748.64
12" CMP

SANITARY MANHOLE
TC =750.08
INV N =734.73 (15" PVC)
INV S =734.58 (15" PVC)

FDC HOOKUP

N 00°00'00" W 786.91'

20' EASEMENT FOR WATER FACILITIES INSTR. 389012215

12" WATER MAIN

CONC. WALK

16" WATER MAIN

Graham Street

SANITARY MANHOLE
TC = 748.52
INV N = 734.04 15" PVC
INV W = 734.72 8" PVC
INV S = 733.84 15" PVC

MAURICE FRED LINVILLE
AND HELEN ANN LINVILLE
D.B. 218, PG. 650

11.987 AC+/-

THIS SITE IS LOCATED IN ZONE 'X' PER FIRM MAP FOR JOHNSON COUNTY, INDIANA, MAP NUMBERS 18081C0143D & 18081C0231D, DATED AUGUST 2, 2007

DRAINAGE EASEMENT

DRAINAGE EASEMENT

50' BUILDING LINE

50' BUILDING LINE

20' D.E.

S 00°00'00" W 859.22'

TEAM SIX PROPERTIES, LLC

PROPOSED 20' D.E.

S 90°00'00" W 606.94'

PROPOSED 20' D.E.

MAURICE FRED LINVILLE
AND HELEN ANN LINVILLE
D.B. 218, PG. 650

INV =743.79
16" CPP

INV =743.74
12" PVC

INV =743.82
12" PVC

EDGE OF WATER
AVERAGE =743

24" RCP
INV = 746.51

STORM INLET
TC =748.81
INV SE =743.66 (24" RCP)

24" RCP
INV = 743.53

Commerce Parkway

LAND DESCRIPTION

Part of the Northeast Quarter and the Southeast Quarters of Section 11, Township 12 North, Range 4 East of the Second Principal Meridian, City of Franklin, Johnson County, Indiana, described as follows:

BEGINNING at a Mag nail found marking the southwest corner of said Northeast Quarter; thence North 00 degrees 00 minutes 00 seconds East along the west line thereof (basis of bearing derived from a survey completed by Robert Etter and recorded as Instrument Number 94-007806 in the Office of the Recorder of said county) 72.31 feet to the southwest corner of the land of the land of Owens-Illinois Closure, Inc. as described in Instrument Number 96-2491 in said county records; thence South 90 degrees 00 minutes 00 seconds East along the south line thereof 608.36 feet a 5/8 inch rebar found at the northwest corner of Klaiser Plat recorded as Instrument Number 2006-028157 in said county records; thence South 00 degrees 00 minutes 00 seconds West along the west l ine of said platted land 859.22 feet to a 5/8 inch rebar found at the southwest corner thereof; thence North 90 degrees 00 minutes 00 seconds West along the westerly extension of the south line of the Klaiser Plat 606.94 feet to the west line of the Southeast Quarter; thence North 00 degrees 06 minutes 13 seconds West along said west line 786.91 feet to the POINT OF BEGINNING, containing 11.987 acres, more or less.

LEGEND

- FENCE LINE
- FLOW LINE
- UNDERGROUND ELECTRIC LINE
- OVERHEAD UTILITIES
- FIBER OPTIC LINE
- GAS LINE
- STORM SEWER PIPES
- SANITARY SEWER PIPES
- WATER LINE
- ELECTRIC TRANSFORMER
- GAS METER
- UTILITY POLE
- SIGN
- TELEPHONE SPLICE BOX
- FIRE HYDRANT
- WATER METER
- MAILBOX
- SANITARY SEWER STRUCTURE
- WATER VALVE

KA195
REFERENCE MARK 2 IS A STANDARD DISK STAMPED FRANKLIN 1920 NO 2 1974 SET IN A DRILL HOLE IN THE TOP AND SOUTH EDGE OF THE CONCRETE BASE OF A SIGNAL LIGHT, 20 FEET EAST OF THE CENTERLINE OF CROWELL ST., 36 FEET SOUTH OF THE CENTERLINE OF MADISON ST., 59 FEET WEST OF THE WEST RAIL OF THE RAILROAD AND 6 FEET NORTHWEST OF THE MAPLE TREE ELEVATION 729.2, NAVD 88

TBM
A CUT "X"IN A CONCRETE PAD FOR UTILITY BOXES 54 FEET WEST OF THE WEST EDGE OF PAVEMENT OF COMMERCE PARKWAY, 1667 FEET NORTH, ALONG THE MEANDERINGS OF COMMERCE PARKWAY, OF THE INTERSECTION WITH ARVIN DRIVE.
NAVD 88 ELEVATION = 774.86

0 50' 100'

Sym.	Revisions	Date

Designed: RL
Drawn: SJH
Checked:
Scale: 1" = 50'
Date: 09-14-12

PROPERTY SURVEY
CITY OF FRANKLIN SPEC BUILDING
CITY OF FRANKLIN
JOHNSON COUNTY, INDIANA

REGISTERED LAND SURVEYOR
LS 80040299
STATE OF INDIANA
WALTER F. ROBERTS III

9/13/12

BANNING ENGINEERING
853 COLUMBIA ROAD, SUITE #101
PLAINFIELD, IN 46168
BUS: (317) 707-3700, FAX: (317) 707-3800
E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com

Project No: 11191R

Sheet No: C101

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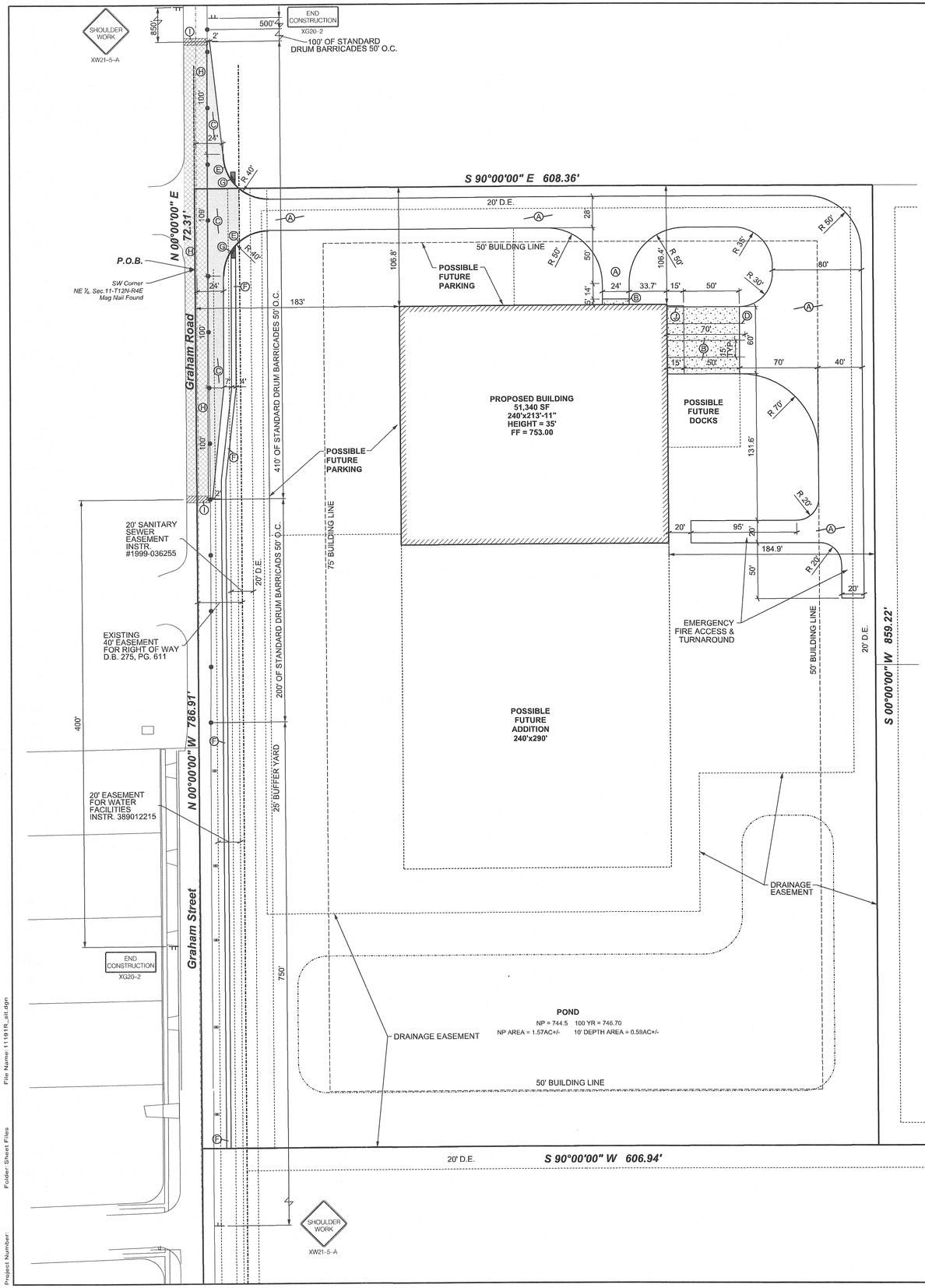

NOTE:
ALL PAVEMENT CONSTRUCTION WITHIN R/W TO COMPLY WITH CITY OF FRANKLIN STANDARDS.

TRAFFIC CONTROL MUST BE IN ACCORDANCE WITH THE CONSTRUCTION AND MAINTENANCE SECTION OF THE INDIANA MANUAL OF UNIFORM TRAFFIC CONTROL DEVISES.

CONSTRUCTION RESTRICTED TO DAYLIGHT HOURS ONLY.

EXISTING SECTION OF GRAHAM DRIVE CONSISTS OF
2 - 11' TRAVEL LANES (1 NORTH BOUND & 1 SOUTH BOUND)
RIGHT-OF-WAY:EXISTING 40'

GENERAL NOTES

1. All work shall be performed in conformance with the Subdivision Control Ordinance of City of Franklin and all other ordinances which pertain to this type of work.
2. No changes in or departure from the plans or specifications shall be made without prior approval, in writing, by the Engineer.
3. The Contractor shall be responsible for obtaining all Federal, State, County and City permits, or any other permits required.
4. Before construction begins, the Contractor shall field verify the location of all utilities shown on the plans, and contact all utility companies to locate all mains, conduits, service lines, etc., in the construction area, and shall protect all such utilities during construction.
5. Before construction begins, the Contractor shall notify the owners, and/or the owner's engineer, so that an inspector may be present.
6. It shall be the responsibility of the Contractor to maintain quality control throughout the project; failure to do so may result in removal and replacement of the defective work. It is recommended that the owner have a qualified inspector on the job site at all times during construction.
7. The Engineer shall be notified of all field tile located on the site during construction. All such field tile shall be incorporated into the storm sewer system so that it remains in working condition.
8. Plans shall be bid as a working system. Any errors or omissions shall be brought to the attention of the Engineer prior to construction. In the event of the contractor's failing to give such notice, he shall be held responsible for the results of any such errors or omissions, and the cost of rectifying the same.
9. Structural fill shall be compacted per the geotechnical report provided by Runnebohm Construction.
10. Liability insurance policy shall be furnished to the owner before any work is started.
11. The contractor shall notify the City of Franklin at least 72 hours prior to any bonded or bank credit letter site improvements are installed. A pre-construction meeting shall be set up with the City, contractor, engineer & owner prior to any construction.
12. These plans shall be used in conjunction with any City of Franklin Standards that apply.

PLAN NOTES

- (A) HEAVY DUTY ASPHALT, SEE DETAIL 1/C501
- (B) CONCRETE PAVEMENT, SEE DETAIL 3/C501
- (C) R/W PAVEMENT, SEE DETAIL 2/C501
- (D) 4" WHITE PAINTED LINE (INDOT STANDARD SPEC.)
- (E) 6" STANDING CURB, SEE DETAIL 6/C501 5/C501
- (F) CONCRETE SIDEWALK, SEE DETAIL
- (G) HANDICAP RAMP TYPE G, SEE DETAIL 8/C501 9/C501
- (H) 1" OVERLAY, HMA SURFACE TYPE B, 9.5mm
- (I) MILL EXISTING PAVEMENT, SEE DETAIL 7/C501
- (J) 8" CONCRETE RETAINING WALL W/ 3 LINE RAIL, SEE ARCHITECT DRAWINGS

0 50' 100'

Sym.	Revisions	Date

Designed: RL
Drawn: SJH
Checked:
Scale: 1" = 50'
Date: 09-14-12

SITE LAYOUT PLAN
CITY OF FRANKLIN SPEC BUILDING
CITY OF FRANKLIN
JOHNSON COUNTY, INDIANA

MALTER F. RECKER III — REGISTERED — PE 60017777 — STATE OF INDIANA — PROFESSIONAL ENGINEER
9/13/12

BANNING ENGINEERING
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E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com

Project No: 11191R
Sheet No: C102

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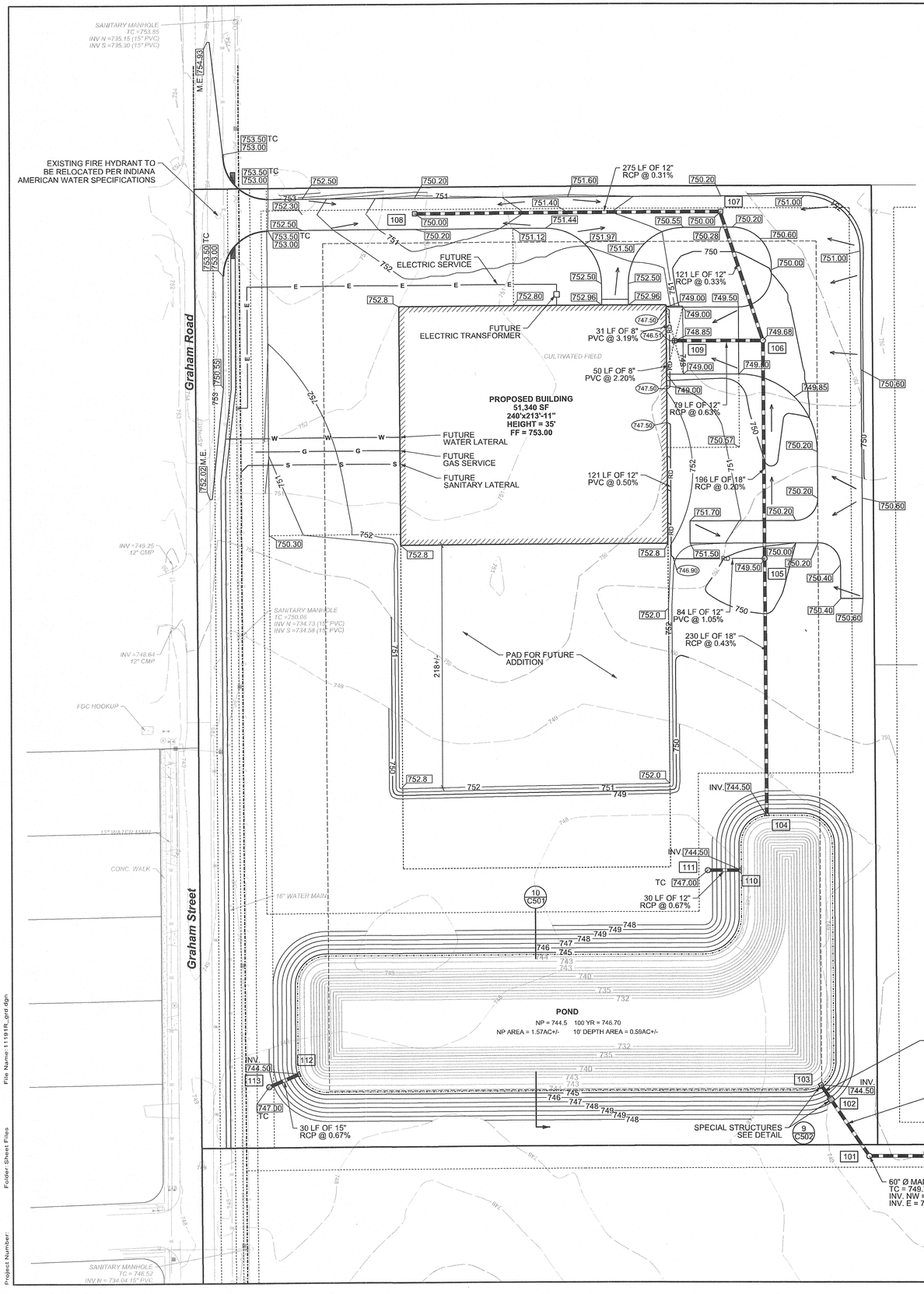

Mass Grading & Fill Operations Design Intent

- Assumed 12" topsoil over entire site
- Fill and compact drive, docks and building to sub-base
- Fill and compact future parking areas and dock areas to within 6" short of plan grades shown, the remaining 6" shall be topsoil to achieve plan grades.
- Fill and compact as much of the future building pad as pond borow quantity will allow to within 6" short of plan grades shown, the remaining 6" shall be topsoil to achieve plan grades.

0 50' 100'

STORM STRUCTURE TABLE

100 CONCRETE END SECTION
INV. = 743.10

101 MANHOLE TYPE J
TC = 749.70
INV. NW = 744.35
INV. E = 744.35

102 SPECIAL STRUCTURE
SEE DETAIL

103 SPECIAL STRUCTURE
SEE DETAIL

104 CONCRETE END SECTION
INV. 744.50

105 2' x 3' CONCRETE BOX
W/ ' NEENAH' R-4342
CASTING
TC = 749.50
INV. S = 745.50
INV. N = 745.50
INV. W = 746.00

106 2' x 3' CONCRETE BOX
W/ 'NEENAH' R-1642
CASTING
TC = 749.68
INV. S = 745.90
INV. NW = 745.90
INV. W = 745.90

107 2' x 2' CONCRETE BOX
W/ 'NEENAH' R-3402-E
CASTING
TC = 750.00
INV. SE = 746.30
INV. W = 746.30

108 2' x 2' CONCRETE BOX
W/ 'NEENAH' R-3402-E
CASTING
TC = 750.00
INV. E = 747.15

109 2' x 2' CONCRETE BOX
W/ 'NEENAH' R-3402-E
CASTING
TC = 748.85
INV. E = 746.40
INV. W = 746.40

110 CONCRETE END SECTION
INV. = 744.50

111 2' x 2' CONCRETE BOX
W/ 'NEENAH' R-4342
CASTING
TC = 747.00
INV. W = 744.70

112 CONCRETE END SECTION
INV. 744.50

113 2' x 2' CONCRETE BOX
W/ 'NEENAH' R-4342
CASTING
TC = 747.00
INV. NE = 744.70

LEGEND

EXISTING		PROPOSED	
X	FENCE LINE	S	STORM SEWER
	FLOW LINE	S	SANITARY SERVICE
E	UNDERGROUND ELECTRIC LINE	W	WATER SERVICE
OHE	OVERHEAD UTILITIES	G	GAS SERVICE
UFO	FIBER OPTIC LINE	E	ELECTRIC SERVICE
G	GAS LINE	RD	ROOF DRAIN
ST	STORM SEWER PIPES		FLOW LINE
S	SANITARY SEWER PIPES		STORM END SECTION
W	WATER LINE	102	STORM STRUCTURE NUMBER
ET	ELECTRIC TRANSFORMER	75.00	SPOT GRADE (ADD 1000)
G	GAS METER	(75.00)	ROOF DRAIN INVERT (ADD 1000)
	UTILITY POLE	M.E.	MATCH EXISTNG
	SIGN	TC	TOP OF CASTING
	TELEPHONE SPLICE BOX	7 C501	DETAIL NUMBER
	FIRE HYDRANT		SHEET FOUND
	WATER METER		
	MAILBOX		
S	SANITARY SEWER STRUCTURE		
	WATER VALVE		

Indiana 811 Know what's below. Call before you dig.

Revisions	Sym.	Date

Designed: RL
Drawn: SJH
Checked:
Scale: 1" = 50'
Date: 09-14-12

GRADING, DRAINAGE & UTILITY PLAN
CITY OF FRANKLIN SPEC BUILDING
CITY OF FRANKLIN
JOHNSON COUNTY, INDIANA

BANNING ENGINEERING
853 COLUMBIA ROAD, SUITE #101
PLAINFIELD, IN. 46168
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E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com

MATTHEW F. REEDER — REGISTERED — PE 60017777 — STATE OF INDIANA — PROFESSIONAL ENGINEER
9/13/12

Project No: 11191R
Sheet No: C110

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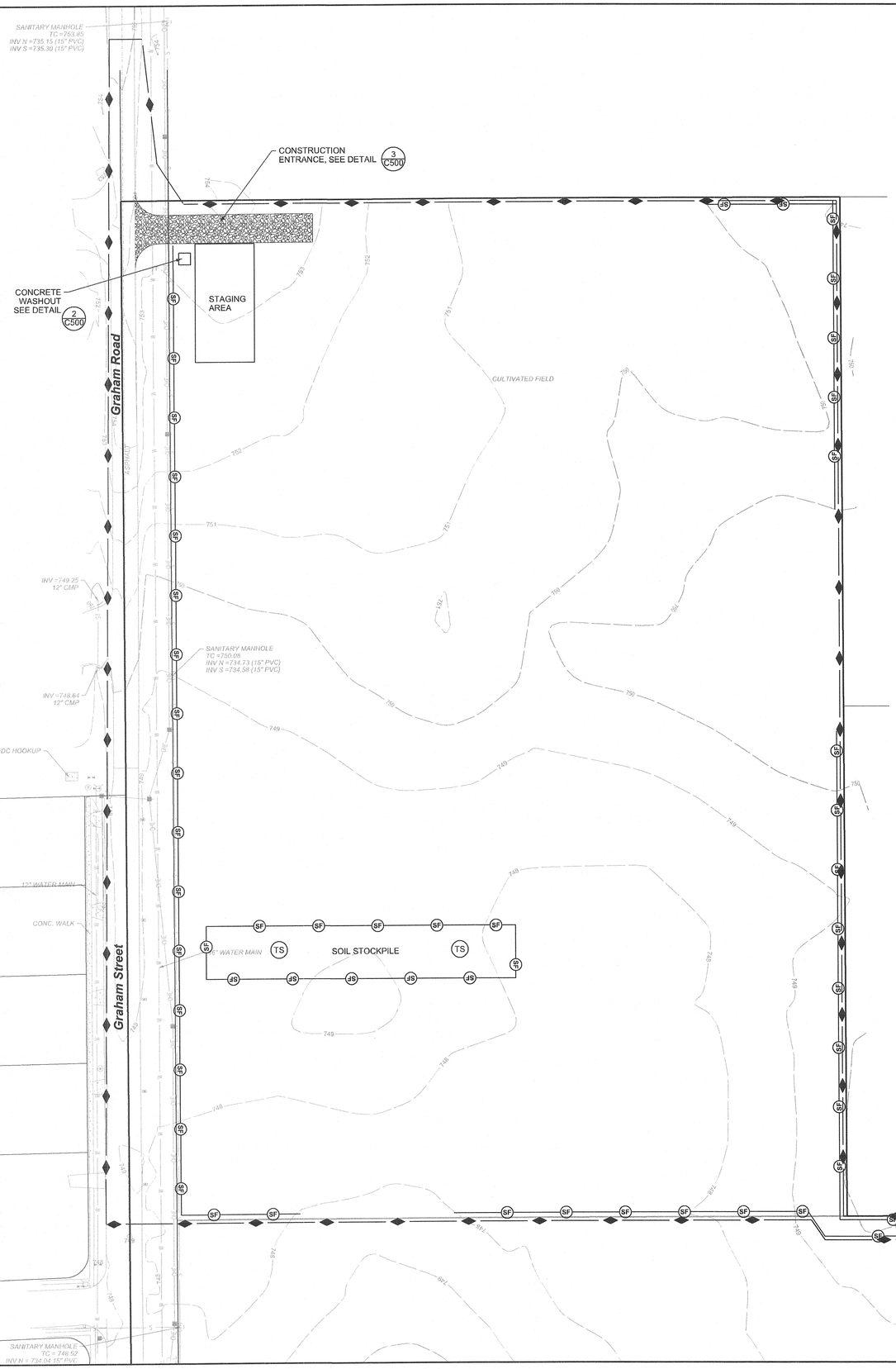


EROSION CONTROL GENERAL NOTES

1. Only those areas within the designated construction limits are to be disturbed during construction.
2. Contractor to provide temporary surface stabilization of any areas scheduled or likely to remain inactive for a period of 15 days or more.
3. Contractor to provide temporary signage near the entrance of the project identifying the responsible parties and other information about the project. Contractor is responsible for obtaining any necessary sign permits for this.
4. Contractor shall implement design concepts and storm water quality measures, which are shown on this plan, to reduce post construction pollutants discharging from the site.
5. All erosion control measures shall meet the Phase 2 IDEM Rule 327 IAC 15-5 requirements.
6. Refer to the "Indiana Storm Water Quality Manual", "The Urban Development Planning Guide", and Manufactures Recommendations for installation for all required measures.
7. Inspection and repair of erosion control measures shall be done weekly and after each ½" rainfall event.

INITIAL EROSION CONTROL SEQUENCING

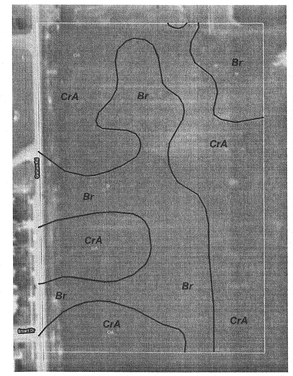
1. Setup a pre-construction meeting (at least 72 hours prior to construction) with Contractor, Owner, Engineer, Johnson County and City of Franklin representative to discuss scheduling and sequencing of project.
2. Contractor shall prepare a self-monitoring plan and procedure, including documentation of weekly self monitoring operations. These documents must be kept on file and made available upon request.
3. Post the approved Rule 5 permit issued by IDEM. Notify IDEM at (317-233-1684), Johnson County and City of Franklin within forty-eight hours of the beginning of construction activities.
4. Start construction log. This log will document the performance of each pollution prevention measure. A thorough site inspection should be completed weekly, and within 24 hours of every ½"rain event.
5. Install construction entrance drive and construction staging area on site as delineated on this sheet.
6. Establish concrete washout as delineated on this plan and associated details.
7. Install perimeter silt fence and protection barriers.
8. Remove trees and rubbish only as needed for construction.
9. Begin mass earth work with the stripping of the topsoil. Stockpile topsoil in those areas designated on this plan. Any proposed offsite storage locations must receive prior written approval from the Owner and have a current clean water permit. Temporary seed and mulch all stockpiles immediately upon completion.

EROSION CONTROL PLAN LEGEND

- CD — TEMPORARY CHECK DAM LOCATION, SEE DETAIL 7 C500
- TS — TEMPORARY SEEDING, SEE DETAIL 1 C500
- SF — SILT FENCE, SEE DETAIL 6 C500
- CONSTRUCTION LIMITS

LAT: 39°29'60" N
LONG: 86°03'15" W
HUC: 0512020409040

0 50' 100'



SOILS MAP
NO SCALE

SOILS DESCRIPTIONS

BROOKSTON SERIES
Br Brookston silt loam (0-2% slopes)
Brookston Series – (B/D) This is a very poorly drained nearly level soil on uplands. Permeability is moderately slow. The pH of the surface layer in non-limed areas is 6.0 to 7.3. This soil is hydric. Basements are not recommended because of wetness concerns. This soil responds well to tile drainage; it is not highly erodible. There is a seasonal high water table associated with this soil. High potential frost action and moderate shrink-swell potential are also construction concerns.

CROSBY SERIES
CrA Crosby silt loam (0-3% slopes)
Crosby Series – (C) This is a somewhat poorly drained gently sloping soil on uplands. Permeability is very slow. The pH of the surface layer in non-limed areas is 5.1 to 6.5. This soil responds well to tile drainage; it is potentially highly erodible. There is a seasonal high water table associated with this soil. High potential frost action and moderate shrink-swell are also construction concerns.

Revisions	Date

Designed: RL
Drawn: SJH
Checked:
Scale: 1" = 50'
Date: 09-14-12

INITIAL EROSION CONTROL
CITY OF FRANKLIN SPEC BUILDING
CITY OF FRANKLIN
JOHNSON COUNTY, INDIANA

BANNING ENGINEERING
853 COLUMBIA ROAD, SUITE #101
PLAINFIELD, IN 46168
BUS: (317) 707-3700, FAX: (317) 707-3800
E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com

Project No: 11191R
Sheet No: C400

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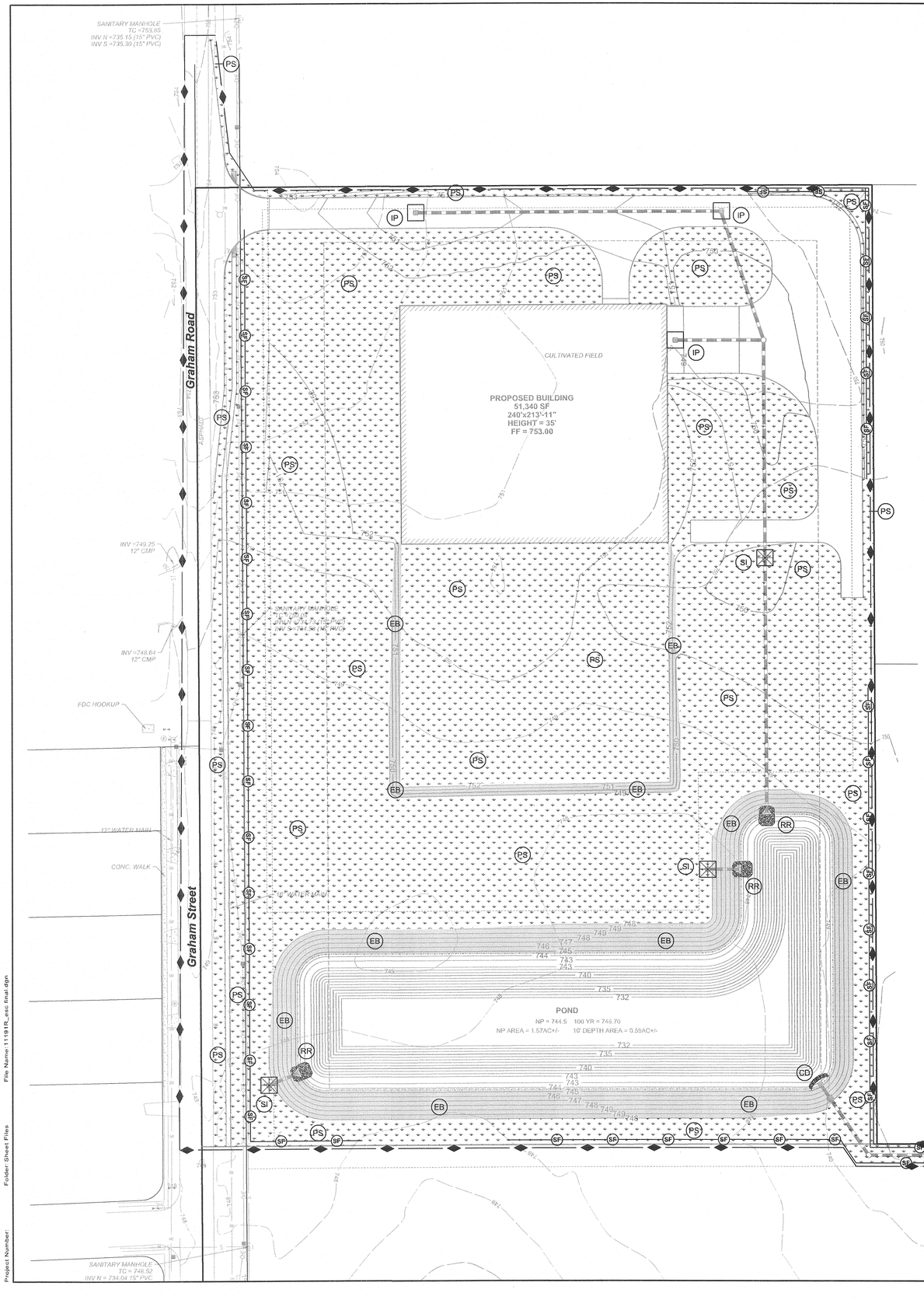

EROSION CONTROL GENERAL NOTES

1. Only those areas within the designated construction limits are to be disturbed during construction.
2. Contractor to provide temporary surface stabilization of any areas scheduled or likely to remain inactive for a period of 15 days or more.
3. Contractor to provide temporary signage near the entrance of the project identifying the responsible parties and other information about the project. Contractor is responsible for obtaining any necessary sign permits for this.
4. Contractor shall implement design concepts and storm water quality measures, which are shown on this plan, to reduce post construction pollutants discharging from the site.
5. All erosion control measures shall meet the Phase 2 IDEM Rule 327 IAC 15-5 requirements.
6. Refer to the "Indiana Storm Water Quality Manual", "The Urban Development Planning Guide", and Manufactures Recommendations for Installation for all required measures.
7. Inspection and repair of erosion control measures shall be done weekly and after each ½" rainfall event.

FINAL EROSION CONTROL SEQUENCING

1. Perform initial erosion control sequence.
2. Install pond outlet storm sewer. Install erosion control measures as required.
3. Install storm sewers. Install sediment barriers as storm sewers have been installed.
4 Rough grade site, install erosion control measures as required.
5. Construct Building.
6. Install remaining utilities.
7. Finish grade drive and docks, install stone base, asphalt and concrete.
8. Finish grade site and replace topsoil.
9. Install erosion control blankets with permanent seeding,and other erosion control measures as shown.
10. Temporarily seed and mulch all areas scheduled or likely to remain inactive for 15 days or more.
11. Permanent seed and mulch all disturbed areas not covered by erosion control blankets .
12. After construction is completed, vegetation established and permission received from Johnson County and City of Franklin representative, remove temporary erosion control measures.

LAT: 39°29'60" N
LONG: 86°03'15" W
HUC: 05120204090040

0 50' 100'

EROSION CONTROL PLAN LEGEND

- EB — EROSION CONTROL BLANKET W/PERMANENT SEEDING (NORTH AMERICAN GREEN S-150) SEE DETAIL 10/C500 11/C500 12/C500
- PS — PERMANENT SEEDING & MULCHING SEE DETAIL 1/C500
- RR — RIP-RAP, D50 = 7" SEE DETAIL 4/C500 5/C500
- CD — TEMPORARY CHECK DAM, SEE DETAIL 7/C500
- IP — INLET SACK PROTECTION, SEE DETAIL 8/C500
- SI — SILT FENCE INLET PROTECTION, SEE DETAIL 9/C500
- CONSTRUCTION LIMITS
- SF — SILT FENCE

Indiana 811 Know what's below. Call before you dig.

Sym.	Revisions	Date

Designed: RL
Drawn: SJH
Checked:
Scale: 1" = 50'
Date: 09-14-12

FINAL EROSION CONTROL
CITY OF FRANKLIN SPEC BUILDING
CITY OF FRANKLIN
JOHNSON COUNTY, INDIANA

JEFF F. REUTER III — REGISTERED — PE 60017777 — STATE OF INDIANA — PROFESSIONAL ENGINEER
9/13/12

BANNING ENGINEERING
853 COLUMBIA ROAD, SUITE #101
PLAINFIELD, IN 46168
BUS: (317) 707-3700, FAX: (317) 707-3800
E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com

Project No: 11191R
Sheet No: C401

09/13/2012, 08:32 AM
SCALE: 50.0000 ' / in.
Project Number:
Folder: Sheet Files
File Name:11191R_esc final.dgn

ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS (SECTION A)

A1 Index showing locations of required Plan Elements:
See This Sheet

A2 11 x 17 Plat denoting building lot numbers, boundaries, road layout / names:
Provide separately with submittal package

A3 Narrative describing the nature and purpose of the project:
City of Franklin Spec Building consists of a proposed building with truck docks and apporiate drainage for the site.

A4 Vicinity map showing Project Location:
See Plan Set : Title Sheet, sheet C100

A5 Legal Description of the Project Site:
See Plan Set : Property Survey, sheet C101
Project Latitude : 39°29'60"N
Project Longitude : 86°03'15"W

A6 Location of all lots and proposed site improvements:
See Plan Set : Grading and Drainage Plan, sheet C110

A7 Hydrologic unit code
14 digit –05120204090040

A8 State or Federal Water Quality Permits Required:
401 Water quality Certification (IDEM) : None Required
Section 404 Permit (USACE) : None Required
Construction in a Floodway (InDNR) : None Required

A9 Specific Points where Stormwater discharge will leave the site:
The main point of discharge will be through the proposed pond and proposed storm pipe into an existing swale along Commerce Parkway.

A10 Location and names of all wetlands, lakes and water courses on and adjacent to the site:
None

A11 Identification of receiving waters:
Unnamed tributary that drains to Youngs Creek.

A12 Identification of potential discharges to ground water:
None known (abandoned wells sinkholes etc)

A13 100 Year floodplains, floodways and flood fringes:
This site is located in Flood Zone "X" per FIRM Map for Johnson County, Indiana, Map No.s 18081C143D & 18081C0231D, dated August 2, 2007.

A14 Pre-construction & Post construction estimates of Peak Discharges:
10 year Pre-Construction Peak Discharge = 3.34 CFS
10 year Post Construction Peak Discharge = 1.05 CFS

A15 Adjacent land use, including upstream watershed:
See Plan Set : Property Survey, sheet C101
North : Commercial
South : Farm Field/Commercial
East : Farm Field/Commercial
West : Residential/Commercial

A16 Locations and approximate boundaries of all disturbed areas:
See Plan Set : Initial and Final Erosion Control Plans, sheet C400 & C401 (Construction Limits)

A17 Identification of existing vegetative cover:
See Plan Set : Property Survey, sheet C101

A18 Soils map including soil descriptions and limitations:
See Plan Set : Initial Erosion Control Plan, sheet C400

A19 Location, size and dimensions of proposed stormwater systems:
See Plan Set : Grading and Drainage Plan, sheet C110

A20 Plans for any off-site construction activities:
See Plan Set : Grading and Drainage Plan, sheet C110

A21 Location of Proposed soil Stockpiles and /or Borrow areas:
See Plan Set : Initial Erosion Control Plan, sheet C400

A22 Existing site Topography :
See Plan Set : Property Survey, sheet C101

A23 Proposed final topography:
See Plan Set : Grading and Drainage Plan, sheet C110

ASSESSMENT OF STORMWATER POLLUTION PREVENTION PLAN (SECTION B)

B1 Description of potential pollutants sources associated with the construction activities:
Silt and sediment from exposed soils, leaves, mulch, vehicular sources such as leaking fuel or oil, brake fluid, brake dust, antifreeze,trash, debris, biological agents found in trash, fertilizers, herbicides, pesticides, lime dust and concrete washout.

B2 Sequence of stormwater quality implementation relative to land disturbance activities:
See noted sequences on Initial and Final Erosion Control Plans, sheets C400 & C401.

B3 Stable construction entrance location(s) and specifications:
For Locations see Plan Set : Initial Erosion Control Plan, sheet C400
For detail See Plan Set :Erosion Control Details, sheet C500

B4 Sediment control measures for sheet flow areas:
Silt fence will be installed along the eastern edge of the project to collect sediment runoff and along the offsite storm pipe.
For Locations see Plan Set : Initial Erosion Control Plan, sheet C400
For details See Plan Set : Erosion Control Details, sheet C500

B5 Sediment control measures for concentrated flow areas:
Erosion control Blankets, Rock Check Dams, and Rip Rap will be installed to reduce and collect sediment from concentrated flow.
For Locations see Plan Set : Initial and Final Erosion Control Plans,sheet C400 & C401
For details See Plan Set : Erosion Control Details, sheet C500

B6 Storm sewer inlet protection measures, locations and specifications:
Silt Fence Inlet Protection and Inlet Sack Protection will be place at storm inlets.
For Locations see Plan Set : Final Erosion Control Plan, sheet C401
For details See Plan Set : Erosion Control Details, sheet C500

B7 Runoff control measures:
Almost all of the erosion control measures used at this site can be viewed as runoff control measures, with the possible exception of the construction entrance and the concrete washout area, in that they either reduce the velocity, such as silt fence, rock check dams, inlet protection measures, and holding ponds, or reduce the energy of the runoff, such as rip rap.Even erosion control blankets could be said to be a runoff control measure in that they certainly reduce the erosiveness of the runoff.
For Locations see Plan Set : Final Erosion Control Plan, sheet C401
For details See Plan Set : Erosion Control Details, sheet C500

B8 Stormwater outlet protection specifications:
Rip Rap will be install at all storm pipe outlet into the ponds and at the outlet for the pond.
For Locations see Plan Set : Final Erosion Control Plan, sheet C401
For details See Plan Set : Erosion Control Details, sheet C500

B9 Grade stabilization structures and specifications:
None required

B10 Location, dimensions, specifications and construction details of each stormwater quality measure:
For Locations see Plan Set : Initial and Final Erosion Control Plan, sheet C400 & C401
For details See Plan Set : Erosion Control Details, sheet C500

B11 Temporary surface stabilization methods appropriate for each season:
Temporary seeding is required for any area left for 15 days or longer within this project, such as soil stockpiles. If construction goes beyond normal construction season, dormant seeding to be placed.
For Locations see Plan Set : Initial and Final Erosion Control Plans, sheet C400 & C401
For details See Plan Set : Erosion Control Details, sheet C500

B12 Permanent surface stabilization specifications:
Permanent seeding will be applied with the installation of the erosion control blankets around the ponds, embankments, within the completion of onsite storm drainage system, and after replacement of topsoil as described in the construction sequencing.
For Locations see Plan Set : Final Erosion Control Plan, sheet C401
For details See Plan Set : Erosion Control Details, sheet C500

B13 Material handling and spill prevention plan:
MATERIAL HANDLING:

1. The proper management and disposal of waste should be practiced on site at all times to reduce pollution of storm water runoff. Hazardous waste should always be disposed of through a designated hazardous waste management or recycling facility.
2. Designate a waste collection area on-site that does not receive a substantial amount of runoff from upland areas and does not drain directly into a water body.
3. Keep products in original containers with original labels and material safety data information attached. Make sure products are properly sealed to prevent leaks and spills and stored in a weather proof self contained area away from heat, sparks and flames.
4. A program for recycling or disposal of materials associated with or from the project site shall be established by the contractor. All recycling containers shall be clearly labeled.
5. All construction activities are to be monitored and maintained by the contractor. As each new subcontractor comes on-site, the contractor will conduct and document a meeting to ensure awareness of the pollutant prevention program. Guidelines for proper handling, storage and disposal of construction site wastes shall be posted in the storage and use areas, and workers shall be trained in these practices.
6. Containers and equipment must be inspected regularly for leaks, corrosion, support or foundation failure, or any other signs of deterioration and must be tested for soundness. Any found to be defective should be repaired or replaced immediately.

SPILL PREVENTION PLAN:
Purpose:
The intention of this Spill Prevention, Control and Countermeasures (SPCC) is to establish the procedures and equipment required to prevent the discharge of oil and hazardous substances in quantities that violate applicable water quality standards, cause a sheen upon or discoloration of the surface of navigable waters or adjoining shorelines, or cause sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines. The Plan also establishes the activities required to mitigate such discharges (i.e., countermeasures) should they occur.
Definitions:
Pollutant: means pollutant of any kind or in any form, including but not limited to sediment, paint, cleaning agent, concrete washout, pesticides, nutrients, trash, hydraulic fluids, fuel, oil, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged soil.
Discharge:
Includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.
Navigable Waters:
Means all waters of the United States that are connected with a navigable stream, lake, or sea.
[Note: This definition is usually interpreted to mean any wastewater (even normally dry wash or storm sewer) that eventually drains into a navigable stream].
Plan Review and Amendments:
This Plan shall be reviewed and/or amended, if necessary, whenever there is a change in the design of the site, construction, operation, or maintenance which materially affects the site's potential for the discharge of regulated material.
Prediction of Potential Spills:

1. Nearest Navigable Water: Youngs Creek
2. Drainage System: All storm drainage leaves the site by open ditches and closed storm systems to an unnamed tributary of Youngs Creek
3. Possible Spill Sources (During and post construction): Vehicular sources such as leaking fuel or oil, brake fluid, grease, antifreeze; trash and debris, biological agents found in trash and debris, fertilizers, household items including but not limited to cleaning agents, chemicals, paint, herbicides and pesticides.
4. Groundwater Contamination:
The facility maintains NO above ground or under ground storage tanks at this site. Therefore, it is felt that there is little or no possibility of post construction groundwater contamination. The facility does have public sanitary sewer and public water.

Alert Procedures for Spills:

1. Any personnel observing a spill will immediately instigate the following procedure:
   a. Dialing "911" from any telephone.
   b. Notify the appropriate emergency personnel.
2. The Emergency Coordinator will then take the following actions:
   a. Barricade the area allowing no vehicles to enter or leave the spill zone.
   b. Notify the Indiana Department of Environmental Management, Office of Emergency Response by calling the appropriate telephone number:
   Office 317-233-7745
   Toll Free 800-233-7745
   Also the National Response Center at 800-424-8802 and provide the following information:
   - Time of observation of the spill
   - Location of the spill
   - Identity of material spilled
   - Probable source of the spill
   - Probable time of the spill
   - Volume of the spill and duration
   - Present and anticipated movement of the spill
   - Weather conditions
   - Personnel at the scene
   - Action initiated by personnel
   c. Notify the City of Franklin Fire Department Phone: 9-1-1
   d. Notify the City of Franklin Police department Phone: 9-1-1
   e. Notify waste recovery contractor, maintenance personnel or other contractual personnel as necessary for cleanup.
   f. Coordinate and monitor cleanup until the situation has been stabilize and all spills have been eliminated.
   g. Cooperate with the IDEM-OER on procedures and reports involved with the event.

Cleanup Parameters:

1. The Developer shall be continually kept informed, maintain lists of qualified contractors and available Vac-trucks, tank pumpers and other equipment readily accessible for clean-up operations. In addition, a continually updated list of available absorbent materials and clean-up supplies should be kept on site.
2. All maintenance personnel will be made aware of techniques for prevention and containment of spills. They will be informed of the requirements and procedures outlined in this plan. They will be kept abreast of current developments or new information on the prevention of spills and / or necessary alterations to this plan.
3. If spills occur which could endanger human life, this becomes the primary concern. The discharge of the life saving protection function will be carried out by the local police and fire departments.
4. Absorbent materials, which are used in cleaning up spilled materials, will be disposed of in a manner subject to the approval of the Indiana Department of Environmental Management.
5. Flushing of spilled material with water will not be permitted unless so authorized by the Indiana Department of Environmental Management.

ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES
VEHICLE & EQUIPMENT MAINTENANCE
Description and Purpose:
Prevent or reduce the contamination of stormwater resulting from vehicle and equipment maintenance by running a "dry and clean site". The best option would be to perform maintenance activities at an offsite facility. If this option is not available then work should be performed in designated areas only, while providing cover for materials stored outside, checking for leaks and spills, and containing and cleaning up spills immediately.
Suitable Applications:
These procedures are suitable on all construction projects where an onsite yard area is necessary for storage and maintenance of heavy equipment and vehicles.
Limitations:
Onsite vehicle and equipment maintenance should only be used where it is impractical to send vehicles and equipment offsite for maintenance and repair. Sending vehicles/ equipment offsite should be done in conjunction with a stabilized Construction Entrance/ Exit. Outdoor vehicle or equipment maintenance is a potentially significant source of stormwater pollution. Activities that can contaminate stormwater include engine repair and service, changing or replacement of fluids, and outdoor equipment storage and parking (engine fluid leaks).
Implementation:
If maintenance must occur onsite, use designated areas, located away from drainage courses. Dedicated maintenance areas should be protected from stormwater runon and runoff, and should be located at least 50 ft from downstream drainage facilities and watercourses.

Drip pans or absorbent pads should be used during vehicle and equipment maintenance work that involves fluids, unless the maintenance work is performed over an impermeable surface in a dedicated maintenance area.

Place a stockpile of spill cleanup materials where it will be readily accessible.

ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES (CONTINUED):

All fueling trucks and fueling areas are required to have spill kits and/or use other spill protection devices.

Use absorbent materials on small spills. Remove the absorbent materials promptly and dispose of properly.

Inspect onsite vehicles and equipment daily at startup for leaks, and repair immediately, or remove from site.

Keep vehicles and equipment clean; do not allow excessive build-up of oil and grease. Segregate and recycle wastes, such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, hydraulic and transmission fluids. Provide secondary containment and covers for these materials if stored onsite.

Train employees and subcontractors in proper maintenance and spill cleanup procedures. Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.

Do not place used oil in a dumpster or pour into a storm drain or watercourse.

Properly dispose of or recycle used batteries.

Do not bury used tires.

Repair leaks of fluids and oil immediately.

Keep ample supplies of spill cleanup materials onsite.

Maintain waste fluid containers in leak proof condition.

VEHICLE AND EQUIPMENT FUELING
Description and Purpose
Vehicle equipment fueling procedures and practices are designed to prevent fuel spills and leaks, and reduce or eliminate contamination of stormwater. This can be accomplished by using offsite facilities, fueling in designated areas only, enclosing or covering stored fuel, implementing spill controls, and training employees and subcontractors in proper fueling procedures.
Limitations
Onsite vehicle and equipment fueling should only be used where it is impractical to send vehicles and equipment offsite for fueling. Sending vehicles and equipment offsite should be done in conjunction with a Stabilized Construction Entrance/Exit.
Implementation
Use offsite fueling stations as much as possible. These businesses are better equipped to handle fuel and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate fueling area at a site.

Discourage "topping off" of fuel tanks.

Absorbent spill cleanup materials and spill kits should be available in fueling areas and on fueling trucks, and should be disposed of properly after use.

Drip pans or absorbent pads should be used during vehicle and equipment fueling, unless the fueling is performed over an impermeable surface in a dedicated fueling area.

Use absorbent materials on small spills. Do not hose down or bury the spill. Remove the absorbent materials promptly and dispose of properly.

Avoid mobile fueling of mobile construction equipment around the site; rather, transport the equipment to designated fueling areas.

Train employees and subcontractors in proper fueling and cleanup procedures.

Dedicated fueling areas should be protected from stormwater runon and runoff and should be located at least 50 ft away from downstream drainage facilities and watercourses. Fueling must be performed on level grade areas.

Protect fueling areas with berms and dikes to prevent runon, runoff, and to contain spills.

Nozzles used in vehicle and equipment fueling should be equipped with an automatic shutoff to control drips. Fueling operations should not be left unattended.

Federal, state, and local requirements should be observed for any stationary above ground storage tanks.

Vehicles and equipment should be inspected each day of use for leaks. Leaks should be repaired immediately or problem vehicles or equipment should be removed from the project site.

Keep ample supplies of spill cleanup materials onsite.

Immediately clean up spills and properly dispose of contaminated soil and cleanup materials.

CONCRETE WASHOUT
The following steps will help reduce stormwater pollution from concrete wastes:
Discuss the concrete management techniques described in this BMP (such as handling of concrete waste and washout) with the ready mix concrete supplier before any deliveries are made.

Incorporate requirements for concrete waste management into material supplies and subcontractor agreements.

Store dry and wet materials under cover, away from drainage areas.

Avoid mixing excess amounts of fresh concrete.

Perform washout of concrete trucks offsite or in designated areas only.

Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.

Do not allow excess concrete to be dumped onsite, except in designated areas.
For onsite washout:
- Locate washout area at least 50 feet from storm drains, open ditches, or water bodies.
-
-
- Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.
- Avoid creating runoff by draining water to a bermed or level area when washing concrete to remove fine particles and expose the aggregate.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile or dispose in the trash.

SOLID WASTE MANAGEMENT
Description and Purpose
Solid waste management procedures and practices are designed to prevent or reduce the discharge of pollutants to stormwater from solid or construction waste by providing designated waste collection areas and containers, arranging for regular disposal, and training employees and subcontractors.

Suitable Applications
This BMP is suitable for construction sites where the following wastes are generated or stored:
Solid waste generated from trees and shrubs removed during land clearing, demolition of existing structures (rubble), and building construction.

Packaging materials including wood, paper, and plastic.

Scrap or surplus building materials including scrap metals, rubber, plastic, glass pieces and masonry products.

Domestic wastes including food containers such as beverage cans, coffee cups, paper bags, plastic wrappers, and cigarettes.

Construction wastes including brick, mortar, timber, steel and metal scraps, pipe and electrical cuttings, nonhazardous equipment parts, styrofoam and other materials from transport and package construction materials

Implementation
Select designated waste collection areas onsite.

Inform contractors that you will accept only watertight dumpsters for onsite use.

Inspect dumpsters for leaks and repair any dumpster that is not watertight.

ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES (CONTINUED):

Provide an adequate number of containers with lids or covers that can be placed over the container to keep rain out or to prevent loss of wastes when it is windy.

Plan for additional containers and more frequent pickup during the demolition phase of construction.

Collect site trash daily, especially during rainy and windy conditions.

Remove this solid waste promptly since erosion and sediment control devices tend to collect litter.

Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.

Do not hose out dumpsters on the construction site. Leave dumpster cleaning to the trash hauling contractor.

Arrange for regular waste collection before containers overflow.

Clean up immediately if a container does spill.

Make sure that construction waste is collected, removed, and disposed of only at authorized disposal areas.

Incorporate requirements for solid waste management into builder and subcontractor agreements.

Littering on the project site should be prohibited.

To prevent clogging of the storm drainage system, litter and debris removal from drainage grates, trash racks, and ditch lines should be a priority.

Trash receptacles should be provided in the contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods.

Litter from work areas within the construction limits of the project site should be collected and placed in watertight dumpsters at least weekly, regardless of whether the litter was generated by the contractor, the public, or others. Collected litter and debris should not be placed in or next to drain inlets, stormwater drainage systems, or watercourses.

Dumpsters of sufficient size and number should be provided to contain the solid waste generated by the project.

Full dumpsters should be removed from the project site and the contents should be disposed of by the trash hauling contractor.

Construction debris and waste should be removed from the site biweekly or more frequently as needed.

Construction material visible to the public should be stored or stacked in an orderly manner.

Stormwater runon should be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures or through the use of measure to elevate waste from site surfaces.

Solid waste storage areas should be located at least 50 ft. from drainage facilities and watercourses and should not be located in area prone to flooding or ponding.

Inspection and Maintenance
Inspect construction waste area weekly.

Arrange for regular waste collection.

B14 Monitoring and maintenance guidelines for each proposed stormwater quality measure:
Each Measure shall be inspected weekly and after each 1/2" rainfall event. Follow maintenance guidelines for each measure as specified in each relevant construction detail.
See Plan Set : Erosion Control Details, sheet C500

B15 Erosion & sediment control specifications for individual building lots:
N/A

STORMWATER POLLUTION PREVENTION PLAN POST CONSTRUCTION (SECTION C)

C1 Description of pollutants and their sources associated with the proposed land use:
Leaves, mulch, vehicular sources such as leaking fuel or oil, brake fluid, brake dust, grease, antifreeze, metals, rubber fragments, road grit, salts and sands, trash and debris, fertilizers, cleaning agents chemicals, paint, animal waste, elevated storm runoff temperatures, pesticides and pathogens.

C2 Sequence describing stormwater quality measure implementation:
Reference Erosion Control Sequencing
See Plan Set : Initial and Final Erosion Control Plans, sheets C400 & C401

Permanent Seeding
Permanent seeding will be place within 15 days after final grading is completed.

Wet Detention Basin
Wet Detention Basin will be initially excavated as part of mass grading of the site.
It will be used throughout the construction phase to control sediment, then persist into the post construction phase as a permanent feature providing stormwater retention and sediment control.

C3 Description of proposed post construction stormwater quality measures:

Permanent Seeding
Permanent seeding will be placed to act as a filter and to prevent erosion.

Wet Detention Basin
It serves to control the volume and rate of runoff. The facility removes sediment, BOD organic nutrients and trace metals through the process of settling of pollutants. Biological processes occurring in the pond aid in reducing the amount of soluble nutrients present such as nitrate and phosphorus.

C4 Location, dimensions, specifications and construction details of stormwater quality measures:
For Locations see Plan Set : Initial and Final Erosion Control Plans, sheet C400 & C401
For details See Plan Set : Erosion Control Details, sheet C500

C5 Description of maintenance guidelines for post construction stormwater quality measures:

Permanent Seeding
Permanent seeding areas should be checked annually for issues related to performance. During this time plant seed if necessary and address any erosion problems. Trash should be removed on an as need basis. The grass should be kept to a 3" - 4' height.
Maintenance is the responsibility of the owner.

Wet Detention Basin
Inlets and outlets should be checked to make sure they are free of debris.
The wet ponds should be checked semiannually to ensure proper performance.
Banks should be checked for erosion, and repaired if necessary. Sediment should be removed from the pool when the accumulated sediment volume exceeds 20% of the basin volume. Maintenance shall be done by the owner.

EXAMPLE EVALUATION LOG SHEET

EVALUATION FOR CONSTRUCTION PROJECTS
A trained individual shall perform a written evaluation of the project site.
a. By the end of the next business day following each rainfall that exceeds 0.5".
b. A minimum of one (1) time per week

Project Name:
Name of Trained Individual: _____ Date of Inspection: _____
Is Evaluation following a rainfall? 0 yes 0 no If yes, date the rain stopped: _____ Inches: _____

No.	PROBLEM OR CONCERN	YES	NO	N/A
1.	Is the site information posted at the entrance?			
2.	Are all necessary permits obtained and special provisions being implemented?			
3.	Is a construction entrance installed? Is it effective? Is it enough?			
4.	Are gobic and private streets clean?			
5.	Are appropriate practices installed where stormwater leaves the site?			
6.	Is silt fence entrenched into the ground?			
7.	Is silt fence upright? Do fabric and stakes meet specifications? Is fabric is not too torn? Is silt fence terminated to higher ground? Is it properly joined at ends?			
8.	Are sediment basins and traps installed according to the plan? Are the pipes or rock spillway still functional?			
9.	Is the earthwork for erosion and sediment control practices properly graded, seeded and/or mulched?			
10.	Are diversions, swales, and/or waterbars installed to plan and protected?			
11.	Do perimeter practices have adequate capacity and do not need to be cleaned out?			
12.	Is inlet protection installed on all functional inlets? (not filter fabric under grate)			
13.	Are inlet protection measures installed so water does not flow under it?			
14.	Are the frame, cross-bracing and/or stakes adequate and meet specifications?			
15.	Is the fabric, stone, mulch and/or storre intact without holes or tears?			
16.	Are catch basin insert protection installed where required?			
17.	Has sediment been removed from the catch basin insert protection?			
18.	Has swales and ditches been stabilized or protected?			
19.	Are stormwater outlets adequately stabilized?			
20.	Has temporary stabilization of distributed ground been addressed?			
21.	Has all disturbed areas that will be dormant for 15 days protected?			
22.	Has all protected dormant areas met a minimum 70% coverage?			
23.	Does growing vegetation have sufficient water and/or nutrients to grow?			
24.	Is permanent stabilization of disturbed ground progressing through the project?			
25.	Is final grading and stabilization progressing on completed areas?			
26.	Has the soil been properly prepared for seeding?			
27.	Has hard or soft armoring been installed where natural vegetation will erode?			
28.	Does water pumping operations have a protected outlet and is discharge water clear?			
29.	Has a designated washout been established for concrete trucks?			
30.	Is a dumpster located onsite for trash disposal?			
31.	Are onsite fuel tanks and other toxic materials safely stored and protected?			
32.	Are smaller construction sites not required to file a separate NOI complying with the overall plan?			

ALL PROBLEMS OR CONCERNS NEED TO BE ADDRESSED WITH A CORRECTIVE ACTION
Identify the problem by number and/or provide additional explanation as needed.

Developer Rep. contacted, name and date: _____ Date: _____
Contractor Rep. contacted, name and date: _____ Date: _____
Report submitted by: _____ Date: _____

09/13/2012, 08:20 AM
SCALE: 1.0000 ' / in.
Project Number
Folder:Sheet Files
File Name:11191R_swppp.dgn

Date									
Revisions									
Sym.									
Designed: RL	Drawn: SJH	Checked:	Scale: NONE	Date: 09-14-12					

SWPPP
CITY OF FRANKLIN SPEC BUILDING
CITY OF FRANKLIN
JOHNSON COUNTY, INDIANA

WILLIAM F. REGNER III
REGISTERED
PE 80017777
STATE OF INDIANA
PROFESSIONAL ENGINEER
9/13/12

BANNING ENGINEERING
853 COLUMBIA ROAD, SUITE #101
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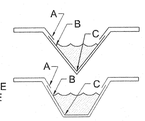
E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com

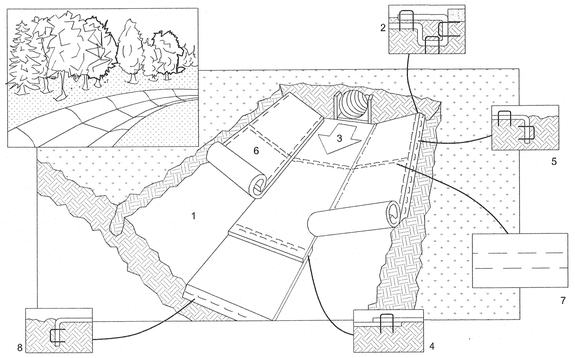
Project No: 11191R
Sheet No: C402

NOTE: HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE RECOMMENDATIONS FOR CHANNELS.

CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES



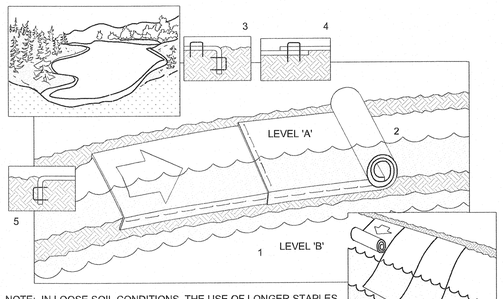


1. Prepare soil before installing blankets, including application of lime, fertilizer, and seed.
2. Begin at the top of the channel by anchoring the blanket in a 6" deep by 6" wide trench. Backfill and compact the trench after stapling.
3. Roll center blanket in direction of water flow on bottom of channel.
4. Place blankets end over end (shingle style) with a 6" overlap. Use a double row of staggered staples 4" apart to secure blankets
5. Full length edge of blankets at the top of side slopes must be anchored in 6" deep by 6" wide trench. Backfill and compact the trench after stapling.
6. Blankets on side slopes must be overlapped 4" over the center blanket and stapled. (2" for C350 matting)
7. In high flow channel applications, a staple check slot is recommended at intervals of 30 to 40 feet. Use a Row of staples 4" apart over entire width of the channel. Place a second row 4" below the first row in a staggered pattern.
8. The terminal end of the blankets must be anchored in a 6" deep x 6" wide trench. Backfill and compact the trench after stapling.

MAINTENANCE
*During vegetative establishment, inspect weekly and after each 1/2" rainfall event for any erosion below the blanket.
*If any area shows erosion, pull back that portion of the blanket covering it, add soil, re-seed the area, and re-lay and staple the blanket.
*After vegetative establishment, check the treated area periodically.

CHANNEL INSTALLATION (11 / C500)

NO SCALE



NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF LONGER STAPLES OR STAKES MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

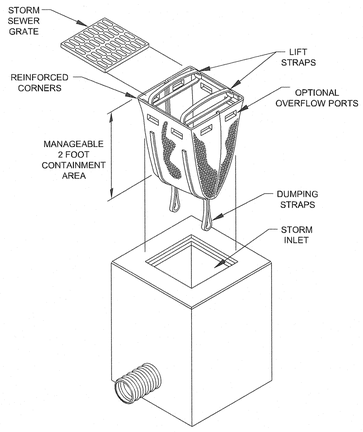
REFER TO GENERAL STAPLE PATTERN GUIDE FOR SHORE LINE INSTALLATIONS.

1. For easier installation, lower water level from level 'A' to level 'B' before installation.
2. Prepare soil before installing blankets, including application of lime, fertilizer, and seed.
3. The top edge of the blanket must be anchored in an 8" deep by 8" wide trench. Backfill and compact the trench after stapling
4. Place blankets end over end with a 3" to 4" overlap. Staple through both blankets of the overlapped area, approximately 6" apart. Adjacent seams where two blankets side by side are joined must consist of a 4" to 6" overlap.
5. The edge of the blanket that falls below normal water level must be anchored in a 12" deep by 8" wide trench. Backfill and compact the trench after stapling. (Stone may be substituted for soil backfill.)
6. For long banks, (top to bottom) use vertical installation.

MAINTENANCE:
*During vegetative establishment, weekly and after each 1/2" rainfall event for any erosion below the blanket.
*If any area shows erosion, pull back that portion of the blanket covering it, add soil, re-seed the area, and re-lay and staple the blanket.
*After vegetative establishment, check the treated area periodically.

SHORELINE INSTALLATION (12 / C500)

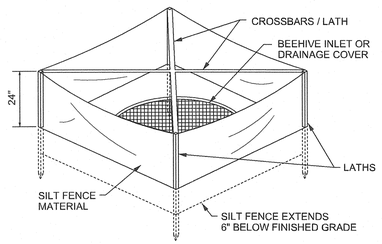
NO SCALE



Maintenance
1. Remove all accumulated sediment and debris weekly or after each 1/2" rainfall event.
2. Remove sediment from bag after bag is 1/3 full.
3. If bag is damaged, remove bag and replace with new.

INLET SACK PROTECTION (8 / C500)

NO SCALE

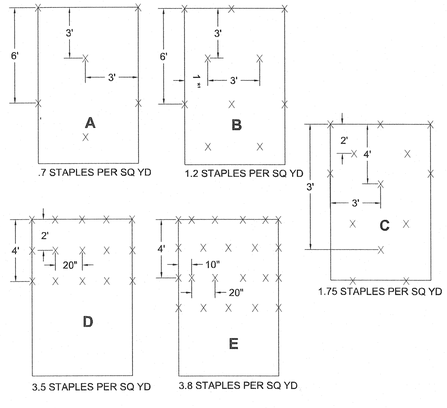


NOTE:
1. SEE SILT FENCE DETAIL FOR MATERIAL SPECIFICATIONS
2. SILT FENCE SHALL BE PREASSEMBLED BY SUPPLIER.

MAINTENANCE
*Inspect the silt fence weekly and after each 1/2" rainfall event.
*If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately.
*Remove deposited sediment when it reaches half the height of the fence at its lowest point or is causing the fabric to bulge.
*Take care to avoid undermining the fence during clean out.
*After the contributing drainage area has been stabilized, remove the fence and sediment deposits, bring the disturbed area to grade, stabilize,

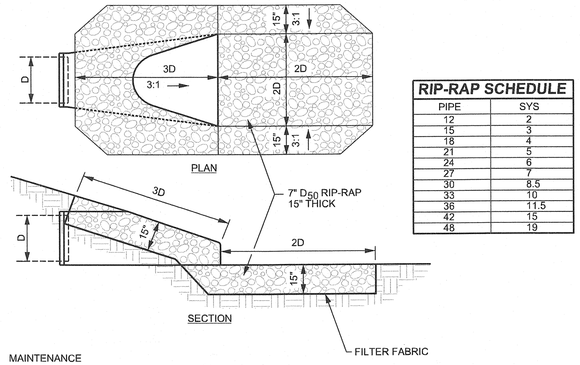
SILT FENCE INLET PROTECTION (9 / C500)

NO SCALE



STAPLE PATTERN GUIDE (10 / C500)

NO SCALE

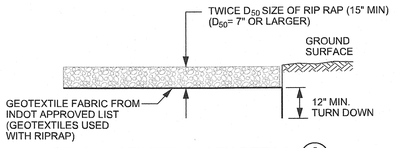


RIP-RAP SCHEDULE	
PIPE	SYS
12	2
15	3
18	4
21	5
24	6
27	7
30	8.5
33	10
36	11.5
42	15
48	19

MAINTENANCE
*Inspect rock chutes weekly and after each 1/2" rainfall event for stone displacement and for erosion at the sides and ends of the apron
*Make needed repairs immediately; use appropriate size stone, do not place them above the finished grade.

RIP-RAP @ PIPE OUTLET (4 / C500)

NO SCALE



RIP-RAP / FILTER CLOTH DETAIL (5 / C500)

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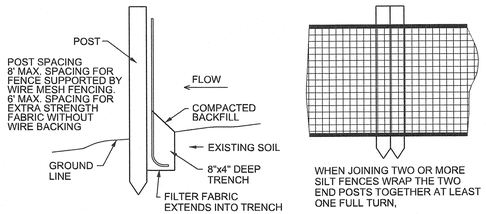
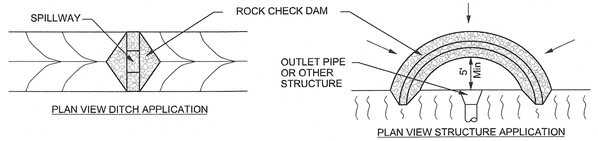
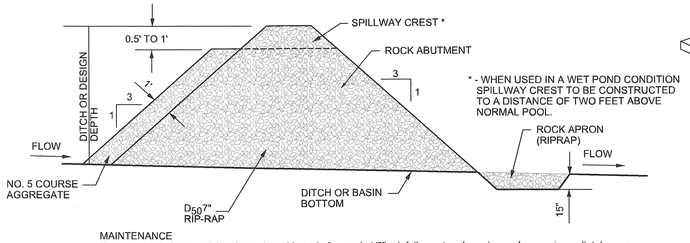


MAINTENANCE
*Inspect the silt fence weekly and after each 1/2" rainfall event.
*If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately.
*Remove deposited sediment when it reaches half the height of the fence at its lowest point or is causing the fabric to bulge.
*Take care to avoid undermining the fence during clean out.
*After the contributing drainage area has been stabilized, remove the fence and sediment deposits, bring the disturbed area to grade, stabilize,

SILT FENCE DETAIL (6 / C500)

NO SCALE



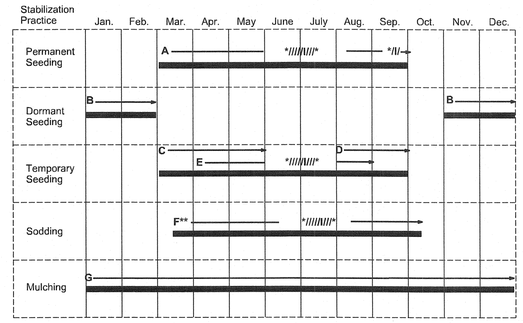


MAINTENANCE
*Inspect check dams and the channel weekly and after each 1/2" rainfall event and repair any damage immediately
*If significant erosion occurs between dams, install a riprap liner in that portion of the channel
*Remove sediment accumulated behind each dam as needed to maintain channel capacity, to allow drainage through the dam, and to prevent large flows from displacing sediment.
*Add rock to the dams as needed to maintain height and cross section.
*

ROCK WASHED OUT-results in channel cutting; repair the washes and replace the rock

TEMPORARY ROCK CHECK DAM (7 / C500)

NO SCALE



A = Kentucky Bluegrass 40 lbs/acre; or 40 lbs. tall Fescue; plus 2 tons straw mulch/acre or add Annual Ryegrass 20 lbs/acre.

B = Kentucky Bluegrass 60 lbs/acre; or 40 lbs. tall Fescue; plus 2 tons straw mulch/acre or add Annual Ryegrass 30 lbs/acre.

C = Spring Oats 100 lbs./acre

D = Wheat or Rye 150 lbs./acre.

E = Annual Ryegrass 40 lbs/acre. (1 lb./1000 sq. ft.)

F = Sod

G = Straw Mulch 2 tons/acre.

// Irrigation needed during June, July, and/or September.

** Irrigation needed for 2 to 3 weeks after applying sod.

Lime and fertilize to site specific soils tests or apply fertilizer at a rate of 1000 lbs. per acre or 12-12-12 or equivalent.

All swales shall be seeded with 2 lbs. Adelphi bluegrass and 2 lbs. Perennial Derby rye, or equivalent per 1000 square feet. mulch with one bale of straw per 1000 square feet. Fertilize with 5 lbs. of 20-5-5 per 1000 square feet unless specified otherwise.

MAINTENANCE
Inspect weekly and after each 1/2" rainfall event, until the stand is successfully established. (Characteristics of a successful stand include: vigorous dark green or bluish-green seedlings; uniform density with nurse plants, legumes, and grasses well inter-mixed; green leaves; and the perennials remaining green throughout the summer, at least at the plant base.)

Plan to add fertilizer the following growing season according to soil test recommendations.

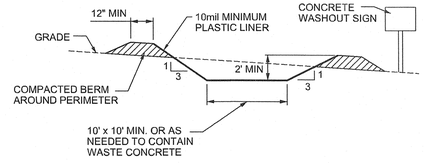
Repair damaged, bare, or sparse areas by filling any gullies, re-fertilizing, over- or re-seeding, and mulching.
If plant cover is sparse or patchy, review the plant materials chosen, soil fertility, moisture condition, and mulching; then repair the affected area either by over-seeding or by re-seeding and mulching after re-preparing the seedbed.

If vegetation fails to grow, consider soil testing to determine acidity or nutrient deficiency problems. (Contact your SWCD or Cooperative Extension office for assistance.)

If additional fertilization is needed to get a satisfactory stand, do so according to the soil test recommendations.

SEEDING CHART (1 / C500)

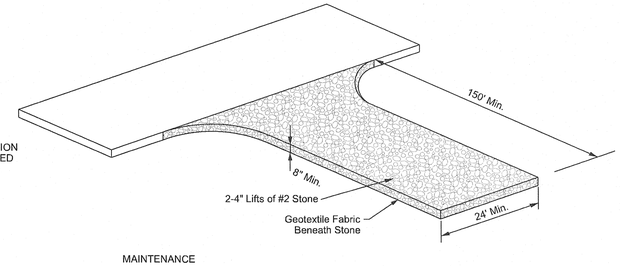
NO SCALE



1. Concrete washout area shall be installed prior to any concrete placement on site.
2. Signs shall be placed at the construction entrance, at the washout area, and elsewhere as necessary to clearly indicate the location of the concrete washout area to all operators of concrete trucks.
3. The concrete washout area shall be repaired, enlarged, or cleaned out as necessary to maintain capacity for wasted concrete.
4. Upon the completion of construction, all wasted concrete shall be removed from the site and disposed of at an approved waste site.
5. When the concrete washout area is removed, the area shall be seeded and mulched or otherwise stabilized in a manner approved by the inspector.

CONCRETE WASHOUT DETAIL (2 / C500)

NO SCALE



MAINTENANCE
*Inspect entrance pad and sediment disposal area weekly and after each 1/2" rainfall event or heavy use.
*Reshape pad as needed for drainage and runoff control.
*Topdress with clean stone as needed.
*Immediately remove mud and sediment tracked or washed onto public roads by brushing or sweeping. Flushing should only be used if the water is conveyed into a sediment trap or basin
*Repair any broken road pavement immediately.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT (3 / C500)

NO SCALE

EROSION CONTROL DETAILS
CITY OF FRANKLIN SPEC BUILDING
CITY OF FRANKLIN
JOHNSON COUNTY, INDIANA

Sym. | Revisions | Date

Designed: RL
Drawn: SJH
Checked:
Scale: NONE
Date: 09-14-12

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WALTER F. RECKER III REGISTERED PE 60017777 STATE OF INDIANA PROFESSIONAL ENGINEER
9/19/12

Project No: 11191R
Sheet No: C500

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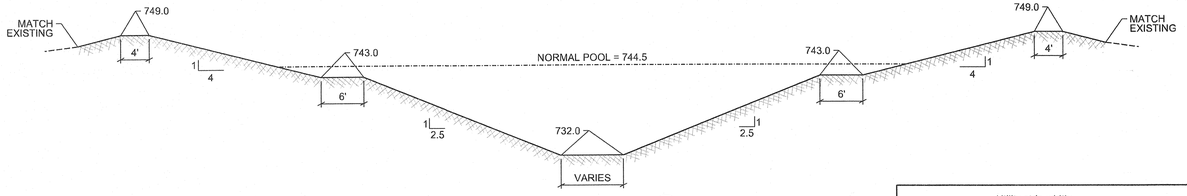

POND SECTION (10 / C501)
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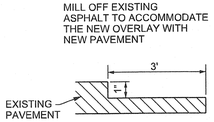

MILLING DETAIL (7 / C501)
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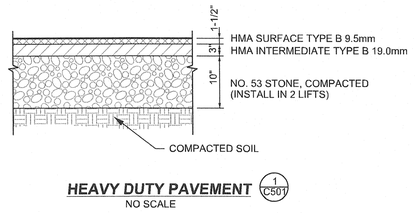

HEAVY DUTY PAVEMENT (1 / C501)
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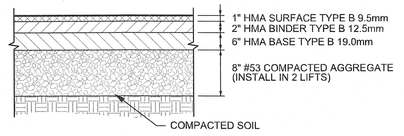

R/W PAVEMENT (2 / C501)
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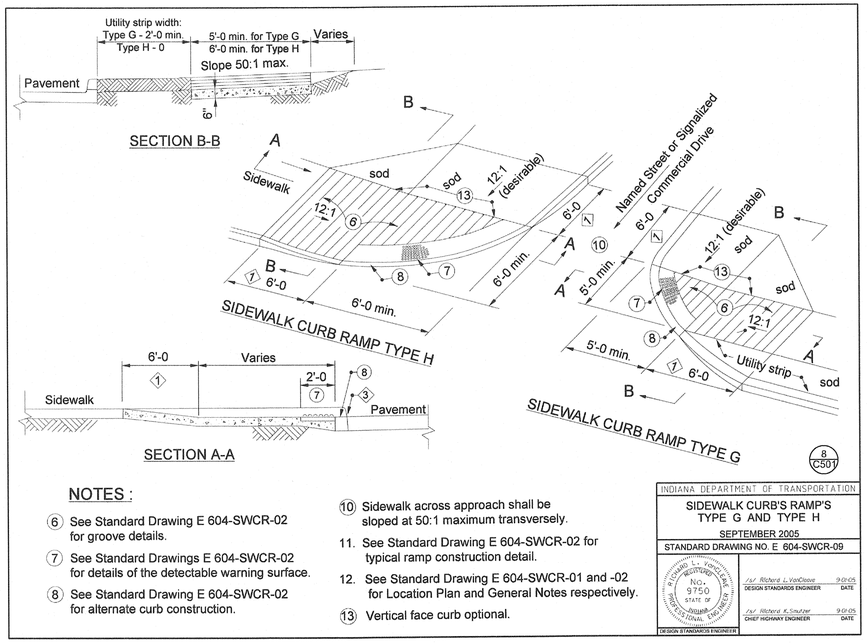


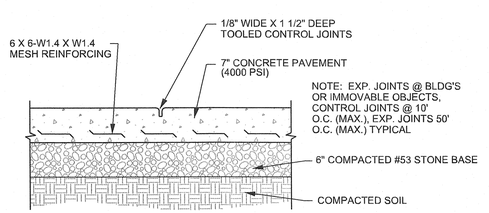
(8 / C501)

NOTES :

6. See Standard Drawing E 604-SWCR-02 for groove details.
7. See Standard Drawings E 604-SWCR-02 for details of the detectable warning surface.
8. See Standard Drawing E 604-SWCR-02 for alternate curb construction.
10. Sidewalk across approach shall be sloped at 50:1 maximum transversely.
11. See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.
12. See Standard Drawing E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.
13. Vertical face curb optional.

INDIANA DEPARTMENT OF TRANSPORTATION
SIDEWALK CURB'S RAMP'S TYPE G AND TYPE H
SEPTEMBER 2005
STANDARD DRAWING NO. E 604-SWCR-09

/s/ Richard L VanDeusen 9-01-05 — DESIGN STANDARDS ENGINEER — DATE
/s/ Richard K Souther 9-01-05 — CHIEF HIGHWAY ENGINEER — DATE



CONCRETE PAVEMENT DETAIL (3 / C501)
NO SCALE

CONCRETE EXPANSION JOINT DETAIL (4 / C501)
NO SCALE

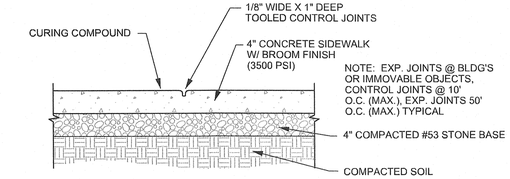
GENERAL NOTES :

1. These dimensions are based on a 6 in. curb height. They shall be proportionally adjusted for other curb heights.
2. Where site infeasibility precludes construction to the width shown, such width may be decreased to a minimum of 3'-0.
3. The bottom edge of the curb ramp shall be flush with the edge of adjacent pavement and gutter line.
4. Landing areas at the top of curb ramps shall have maximum cross slope of 50 : 1 in any direction. When site infeasibility precludes a landing slope of 50 : 1 in any direction, the slope perpendicular to the curb face shall not exceed 50 :1.
5. If site infeasibility precludes construction to the width shown, the landing width may be decreased to 3'-0 minimum. The running slope of the curb ramp may be steepened to a maximum of 10 : 1 for a maximum 6 in. rise.
6. Drainage inlets should be located uphill from curb ramps to prevent puddles at the path of travel.
7. See Standard Drawing E 604-SWCR-12 for improved access on narrow sidewalks.
8. Algebraic difference in grade between the base of curb ramp and the gutter shall be limited to less than 11%. If it is not practical, a 2'-0 wide level strip shall be provided. See detail sketch.
9. Minimum recommended width of curb ramp is 4'-0.

9
C501

INDIANA DEPARTMENT OF TRANSPORTATION
SIDEWALK CURB RAMPS GENERAL NOTES & DETAILS
SEPTEMBER 2005
STANDARD DRAWING NO. E 604-SWCR-02

/s/ Richard L VanDeusen 9-01-05 — DESIGN STANDARDS ENGINEER — DATE
/s/ Richard K Souther 9-01-05 — CHIEF HIGHWAY ENGINEER — DATE



4" CONCRETE SIDEWALK DETAIL (5 / C501)
NO SCALE

6" STANDING CURB DETAIL (6 / C501)
NO SCALE

MISCELLANOUS DETAILS
CITY OF FRANKLIN SPEC BUILDING
CITY OF FRANKLIN
JOHNSON COUNTY, INDIANA

Sym.	Revisions	Date

Designed: RL
Drawn: SJH
Checked:
Scale: NONE
Date: 09-14-12

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WILLIAM F. REDER III — REGISTERED — PE 60017777 — STATE OF INDIANA — PROFESSIONAL ENGINEER — 9/13/12

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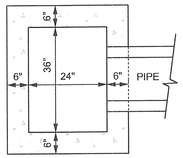

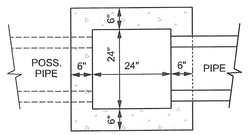

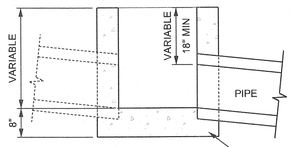

2' x 3' CONCRETE BOX (11 C502)
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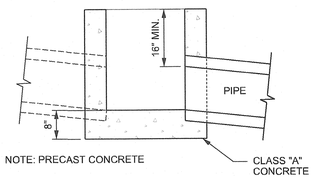

2' x 2' CONCRETE BOX (10 C502)
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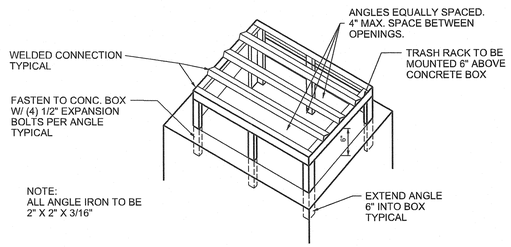

TRASH RACK DETAIL (7 C502)
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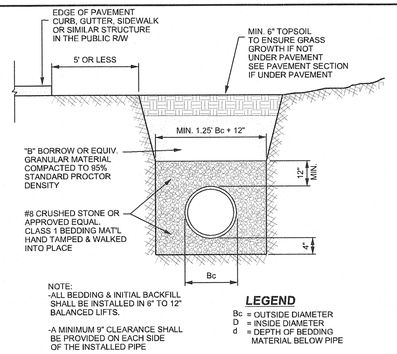
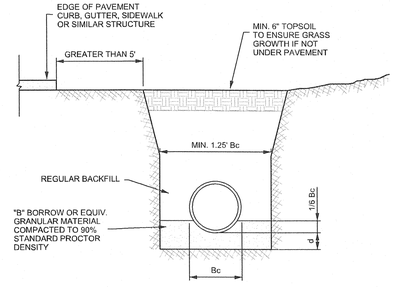


PVC PIPE TRENCH DETAIL (4 C502)
WITHIN 5' FROM EDGE OF PAVEMENT
NO SCALE

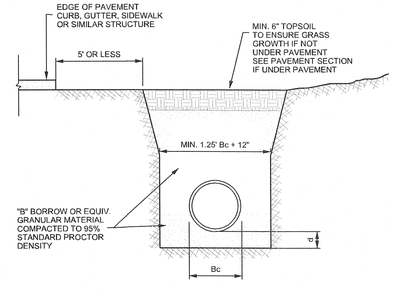


DEPTH OF BEDDING MATERIAL BELOW PIPE

D	(d) MIN.
27" & SMALLER	3"
30" TO 60"	4"
66" & GREATER	6"

LEGEND
Bc = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

REINFORCED CONCRETE PIPE (RCP) TRENCH DETAIL (1 C502)
GREATER THAN 5' FROM EDGE OF PAVEMENT
NO SCALE

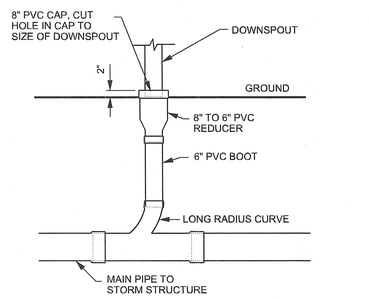


DEPTH OF BEDDING MATERIAL BELOW PIPE

D	(d) MIN.
27" & SMALLER	3"
30" TO 60"	4"
66" & GREATER	6"

LEGEND
Bc = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

REINFORCED CONCRETE PIPE (RCP) TRENCH DETAIL (2 C502)
WITHIN 5' FROM EDGE OF PAVEMENT
NO SCALE



TYPICAL DOWNSPOUT BOOT CONNECTION (8 C502)
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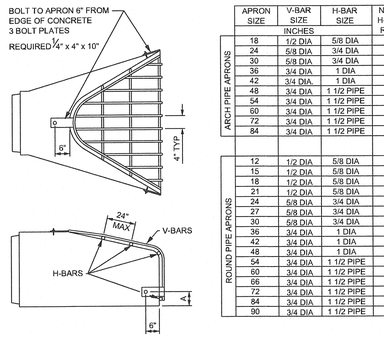
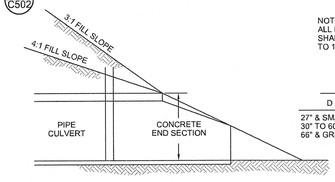


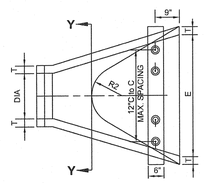
	APRON SIZE	V-BAR SIZE	H-BAR SIZE	NO. OF H-BARS REQ'D	BOLT DIA	"A" DIM
		INCHES			INCHES	
ARCH PIPE APRONS	18	1/2 DIA	5/8 DIA	3	1/2	5
	24	5/8 DIA	3/4 DIA	4	1/2	7
	30	5/8 DIA	3/4 DIA	4	1/2	7 1/2
	36	3/4 DIA	1 DIA	4	1/2	10 1/2
	42	3/4 DIA	1 DIA	4	3/4	11
	48	3/4 DIA	1 1/2 PIPE	4	3/4	12
	54	3/4 DIA	1 1/2 PIPE	4	3/4	12
	60	3/4 DIA	1 1/2 PIPE	5	3/4	14
	72	3/4 DIA	1 1/2 PIPE	5	3/4	14
	84	3/4 DIA	1 1/2 PIPE	6	3/4	15
ROUND PIPE APRONS	12	1/2 DIA	5/8 DIA	3	1/2	4
	15	1/2 DIA	5/8 DIA	3	1/2	4 1/2
	18	1/2 DIA	5/8 DIA	4	1/2	4 1/2
	21	1/2 DIA	5/8 DIA	4	1/2	5
	24	5/8 DIA	3/4 DIA	4	1/2	5
	27	5/8 DIA	3/4 DIA	4	1/2	5 1/2
	30	5/8 DIA	3/4 DIA	4	1/2	5 1/2
	36	3/4 DIA	1 DIA	4	3/4	8
	42	3/4 DIA	1 DIA	4	3/4	8
	48	3/4 DIA	1 DIA	5	3/4	8
	54	3/4 DIA	1 1/2 PIPE	5	3/4	8
	60	3/4 DIA	1 1/2 PIPE	5	3/4	8
	66	3/4 DIA	1 1/2 PIPE	6	3/4	8
	72	3/4 DIA	1 1/2 PIPE	6	3/4	9
	84	3/4 DIA	1 1/2 PIPE	7	3/4	10
	90	3/4 DIA	1 1/2 PIPE	7	3/4	14

NOTES:
1. BARS & PLATES ARE HOT-ROLLED STEEL
2. BARS, PLATES, & PIPES ARE FINISHED WITH 2 COATS OF ALUMINUM PAINT
3. BOLTS ARE GALVANIZED

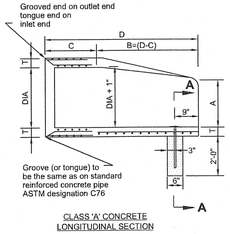
ANIMAL GUARD (5 C502)
NO SCALE



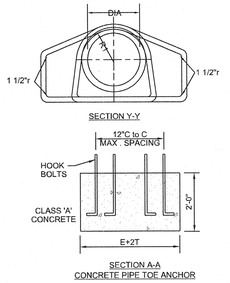
SLOPE DETAIL



PLAN VIEW



CLASS 'A' CONCRETE LONGITUDINAL SECTION



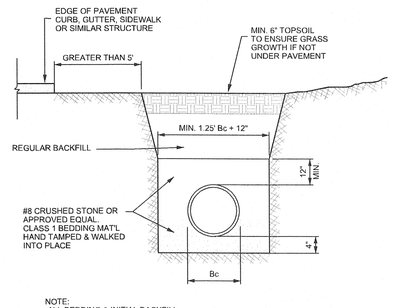
SECTION A-A
CONCRETE PIPE TOE ANCHOR

DIMENSIONS OF CONCRETE END SECTIONS FOR ROUND PIPE

DIA	T (MIN)	A*	C*	D*	E*	K	R_1	R_2	APPROX. WEIGHT
12"	2"	5"	4'-3"	6'-2"	2'-0"	1.3	10 1/8"	9"	800
15"	2 1/4"	7"	4'-0"	6'-3"	2'-6"	1.5	12 1/2"	11"	1,100
16"	2 1/2"	11"	4'-1"	6'-2"	3'-0"	1.8	15 1/2"	12"	1,300
21"	2 3/4"	11"	3'-6"	6'-3"	3'-6"	2.1	16 1/8"	13"	1,500
24"	3"	1'-0"	2'-8"	6'-3"	4'-0"	2.3	16 3/16"	14"	1,800
27"	3 1/4"	1'-0"	2'-5"	6'-3"	4'-6"	2.6	18 1/2"	14 1/2"	2,100
30"	3 1/2"	1'-2"	1'-10"	6'-3"	5'-0"	2.9	18 3/16"	15"	2,400
33"	3 3/4"	1'-3"	3'-6"	8'-3"	5'-6"	3.1	18 1/2"	17 1/2"	4,100
36"	4"	1'-5"	3'-1"	8'-3"	6'-0"	3.4	23 3/4"	20"	4,200

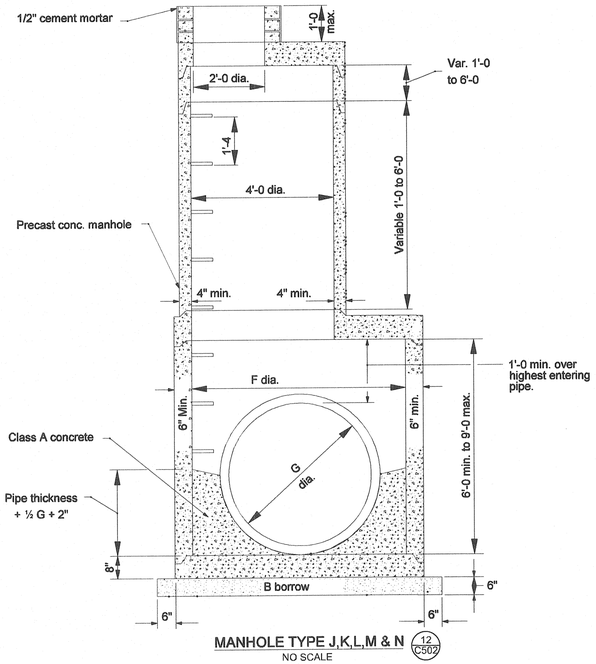
* TOLERANCE +/- 1"

PRECAST CONCRETE END SECTION (6 C502)
NO SCALE

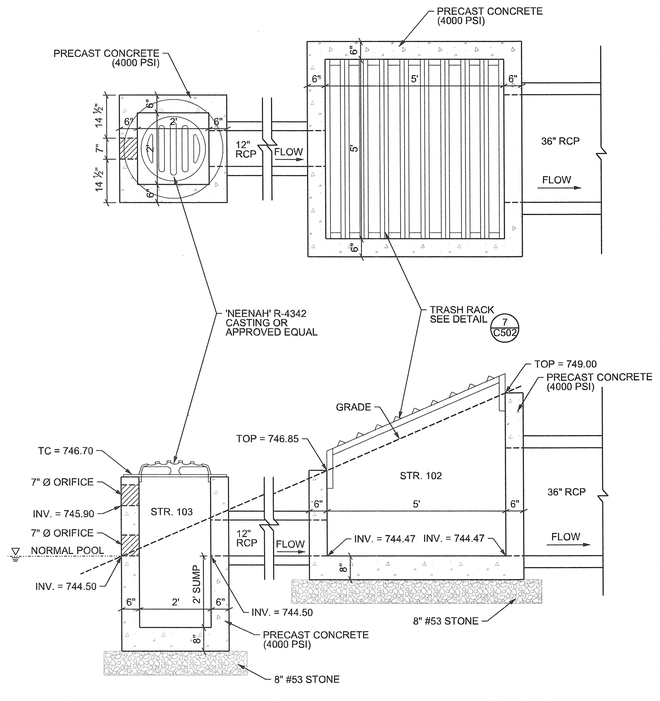


PVC PIPE TRENCH DETAIL (3 C502)
GREATER THAN 5' FROM EDGE OF PAVEMENT
NO SCALE

MANHOLE PIPE SIZES				
Type	G (in.)	F (ft. in.)	Maximum Pipe Size Rt. ∠ to Mainline (in.)	Maximum Pipe Size for Mainline (in.)
H	24 to 36	——	30	36
J	24 to 36	5'-0	30	36
K	36 to 48	6'-0	36	48
L	48 to 54	8'-0	48	54
M	54 to 72	8'-6	66	72
N	72 to 84	9'-0	72	84



MANHOLE TYPE J,K,L,M & N (12 C502)
NO SCALE



STORM STRUCTURES 102 & 103 (9 C502)
NO SCALE

STORM SEWER DETAILS
CITY OF FRANKLIN SPEC BUILDING
CITY OF FRANKLIN
JOHNSON COUNTY, INDIANA

Sym.	Revisions	Date

Designed: RL
Drawn: SJH
Checked:
Scale: NONE
Date: 09-14-12

BANNING ENGINEERING
853 COLUMBIA ROAD, SUITE #101
PLAINFIELD, IN 46168
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WEB: www.BanningEngineering.com

MALTER F. REEDER III — REGISTERED — STATE OF INDIANA — PE 60017777 — PROFESSIONAL ENGINEER
9/13/12

Project No: 11191R
Sheet No: C502

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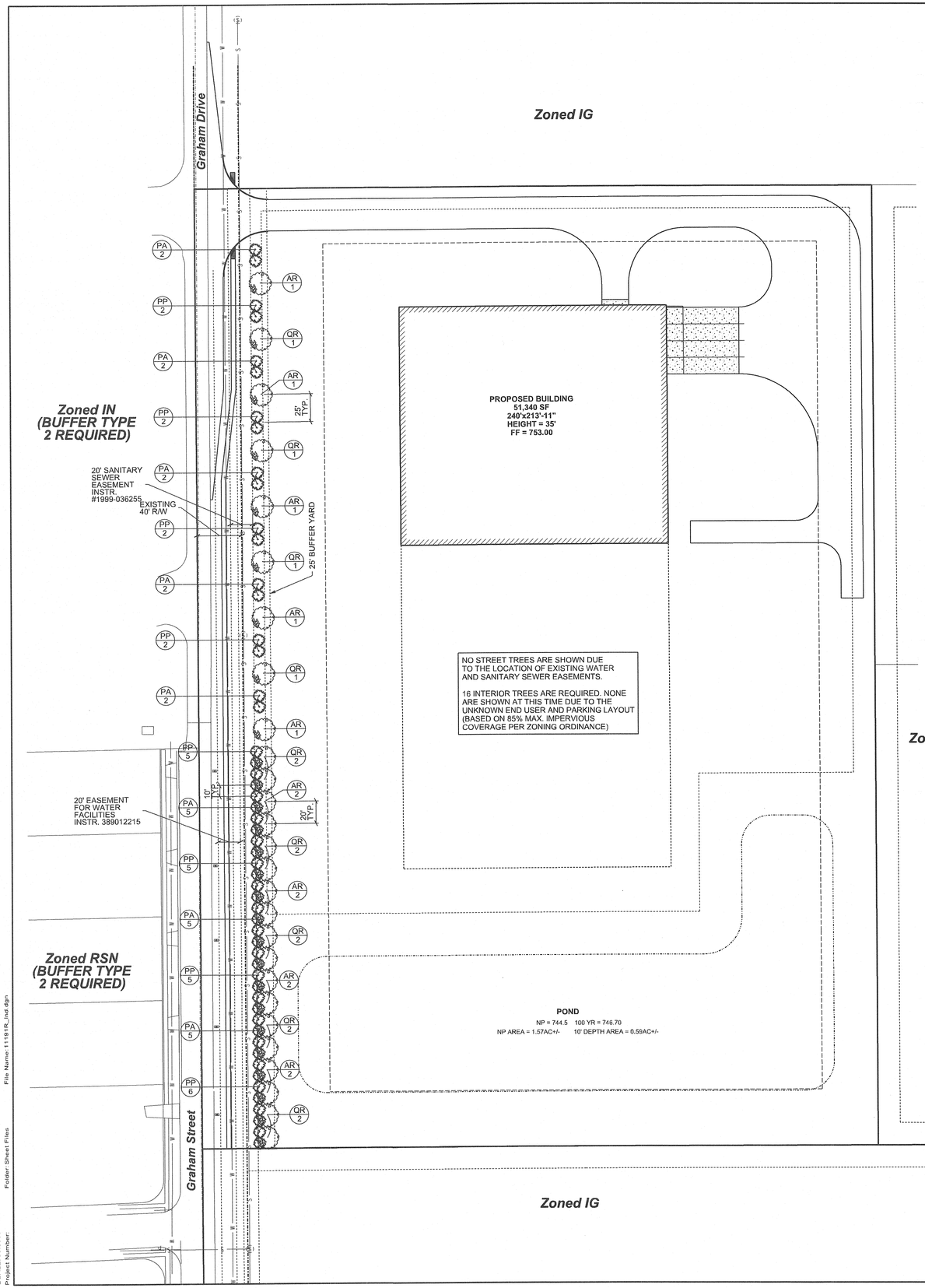


LANDSCAPE SPECIFICATIONS

These specifications cover the furnishing of labor, plants, equipment, and materials to perform landscape operations in connection with this construction project at the locations shown on the landscape drawing.

LANDSCAPE MATERIALS: FERTILIZER:
Granular non-burning product composed of not less than 50% organic slow acting, guaranteed analysis professional fertilizer; 20% nitrogen, 10% phosphoric acid, and 5% potash by weight or similarly approved composition.

PLANTING BACKFILL SOIL:
Backfill plant pits with the following topsoil mixture: 1 part on-site topsoil, 1 part imported topsoil, 1 part compost and 1/2 pound plant specified fertilizer per cubic yard.

PLANT MATERIALS:
Provide trees and shrubs as indicated. Comply with sizing and grading standards of "American Standard for Nursery Stock". Provide only sound, healthy vigorous plants free from defects, disfiguring knots, sunscald injuries, frost cracks, plant diseases, insects or any other form of disease or infestation. All plants shall have fully developed form without voids or open spaces.

PROJECT EXECUTION: SUBSURFACE UTILITIES:
Contractor shall determine utility line locations prior to commencing work. Any conflicts between utility locations, excavation and/or landscape operations shall be brought to Owner's attention prior to commencing excavation and/or grading work. Contractor assumes responsibility for any utility damage resulting from landscape operations. CONTRACTOR SHALL NOTIFY UTILITY LOCATE SERVICE (1.800.382.5544) A MINIMUM OF TWO WORKING DAYS PRIOR TO EXCAVATION.

PLANTING EXCAVATION:
When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage or obstructions, notify owner before planting. See planting details for planting, pruning and staking requirements.

SEEDED LAWN:
Complete all other landscape plantings, mulching, fine grading and staking prior to seeding lawn areas. Provide seeded lawn for all lawn areas utilizing Amer-Turf Front-Runner Turf Type Tall Fescue Blend Seed. Apply Seed at a rate of 5 pounds per 1000 square feet. Apply fertilizer at a rate of 4 pounds of actual nitrogen per 1,000 square feet. Spread topsoil over lawn areas to a depth of two inches and cultivate soil to a depth of three inches prior to seeding. Seed bed shall be in a firm but uncompacted condition with a relatively fine texture at time of seeding. Contractor shall maintain seeding lawn for a period of 60 days beyond final acceptance by mowing and watering as required to maintain vigorous growth during establishment period. Lawn areas shall not have voids larger than 6"x6". If voides are larger than acceptable size an overseeding shall be completed by the contractor during the next available growing season.
Fall growing season August 15th - September 20th. Spring growing season March 20th - April 20th.

PROJECT WARRANTY:
Contractor shall warrant trees, shrubs, and plants for a period of two years after date of substantial completion against defects including death and unsatisfactory growth, except for defects resulting from neglect by the Owner, abuse or damage by others, or unusual phenomena or incidents which are beyond installer's control. Remove and replace trees, shrubs or other plants found to be dead or in unhealthy condition during warranty period. Replace trees and shrubs which are in doubtful condition at end of warranty period.

LANDSCAPE SYMBOLOGY

CANOPY TREE

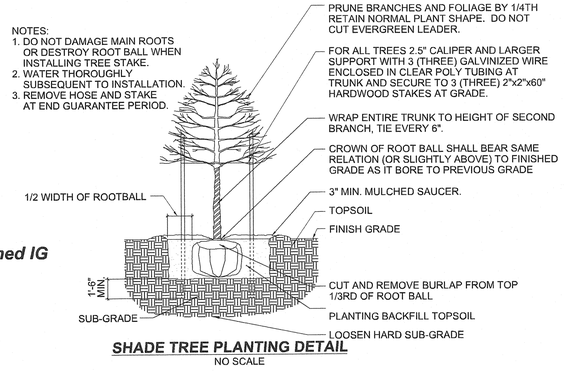
EVERGREEN TREE

AR 20 — SPECIES IDENTIFIER/ PLANT COUNT

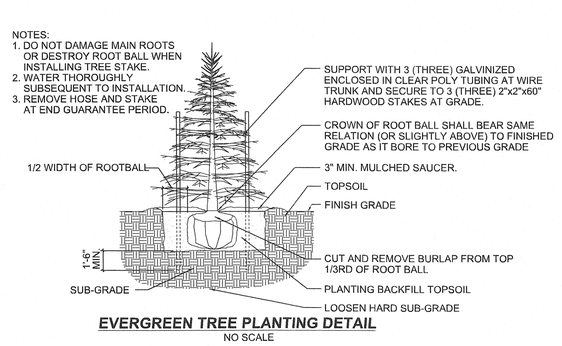
0 50' 100'

PLANT LIST

KEY	PLANT NAME BOTANICAL NAME COMMON NAME	SIZE
AR	Acer rubrum Red Maple	2.5" Caliper
PA	Picea abies Norway Spruce	5' Height
PP	Picea pungens glauca Colorado Blue Spruce	5' Height
QR	Quercus rubra Red Oak	2.5" Caliper



SHADE TREE PLANTING DETAIL
NO SCALE



EVERGREEN TREE PLANTING DETAIL
NO SCALE

Indiana 811 — Know what's below. Call before you dig.

Revisions	Date

Sym.	

Designed: RL
Drawn: SJH
Checked:
Scale: 1" = 50'
Date: 09-14-12

LANDSCAPE PLAN
CITY OF FRANKLIN SPEC BUILDING
CITY OF FRANKLIN
JOHNSON COUNTY, INDIANA

MATTHEW F. REEDER III — REGISTERED — PE 60017777 — STATE OF INDIANA — PROFESSIONAL ENGINEER
9/13/12

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WEB: www.BanningEngineering.com

Project No: 11191R
Sheet No: L100

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